```
* * * * * * * * * *   Welcome to STN International   * * * * * * * * * *

NEWS  1              Web Page URLs for STN Seminar Schedule - N. America
NEWS  2              "Ask CAS" for self-help around the clock
NEWS  3  JAN 27      Source of Registration (SR) information in REGISTRY updated
                     and searchable
NEWS  4  JAN 27      A new search aid, the Company Name Thesaurus, available in
                     CA/CAplus
NEWS  5  FEB 05      German (DE) application and patent publication number format
                     changes
NEWS  6  MAR 03      MEDLINE and LMEDLINE reloaded
NEWS  7  MAR 03      MEDLINE file segment of TOXCENTER reloaded
NEWS  8  MAR 03      FRANCEPAT now available on STN
NEWS  9  MAR 29      Pharmaceutical Substances (PS) now available on STN
NEWS 10  MAR 29      WPIFV now available on STN
NEWS 11  MAR 29      No connect hour charges in WPIFV until May 1, 2004
NEWS 12  MAR 29      New monthly current-awareness alert (SDI) frequency in RAPRA

NEWS EXPRESS  MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
              MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 13 APRIL 2004
NEWS HOURS    STN Operating Hours Plus Help Desk Availability
NEWS INTER    General Internet Information
NEWS LOGIN    Welcome Banner and News Items
NEWS PHONE    Direct Dial and Telecommunication Network Access to STN
NEWS WWW      CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
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  * * * * * * * * * * * * * * STN  Columbus  * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 17:29:12 ON 25 APR 2004

=> file reg
COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                       0.21       0.21

FILE 'REGISTRY' ENTERED AT 17:29:19 ON 25 APR 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   23 APR 2004  HIGHEST RN 676578-75-9
DICTIONARY FILE UPDATES:  23 APR 2004  HIGHEST RN 676578-75-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.
```

Crossover limits have been increased. See HELP CROSSOVER for details.

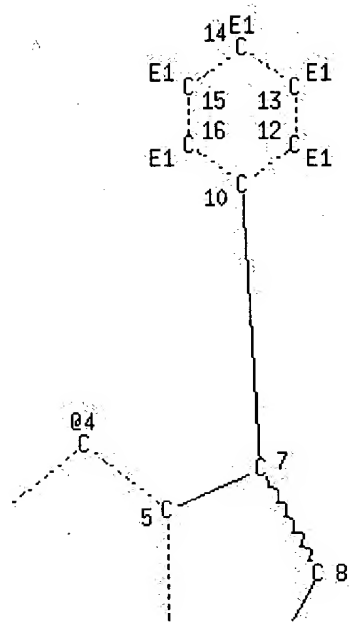
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
L1 STRUCTURE UPLOADED

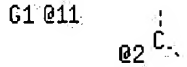
=> l1
L1 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l1
L1 HAS NO ANSWERS
L1 STR
0 17 S 18

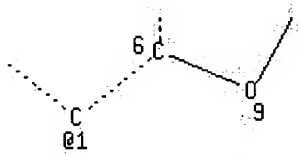
Page 1-A



Page 1-B



Page 2-A



Page 2-B

```
VAR G1=17/18
VPA 11-1/2/3/4 S
NODE ATTRIBUTES:
HCOUNT   IS E1      AT  12
HCOUNT   IS E1      AT  13
HCOUNT   IS E1      AT  14
HCOUNT   IS E1      AT  15
HCOUNT   IS E1      AT  16
NSPEC    IS R       AT   1
NSPEC    IS R       AT   2
NSPEC    IS R       AT   3
NSPEC.   IS R       AT   4
NSPEC    IS R       AT   5
NSPEC    IS R       AT   6
NSPEC    IS R       AT   7
NSPEC    IS R       AT   8
NSPEC    IS R       AT   9
NSPEC    IS R       AT  10
NSPEC    IS C       AT  11
NSPEC    IS R       AT  12
NSPEC    IS R       AT  13
NSPEC    IS R       AT  14
NSPEC    IS R       AT  15
NSPEC    IS R       AT  16
DEFAULT MLEVEL IS ATOM
MLEVEL   IS CLASS   AT  10 12 13 14 15 16 17 18
DEFAULT ECLEVEL IS LIMITED
```

```
GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  18

STEREO ATTRIBUTES: NONE


=> s l1
SAMPLE SEARCH INITIATED 17:31:06 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    567 TO ITERATE

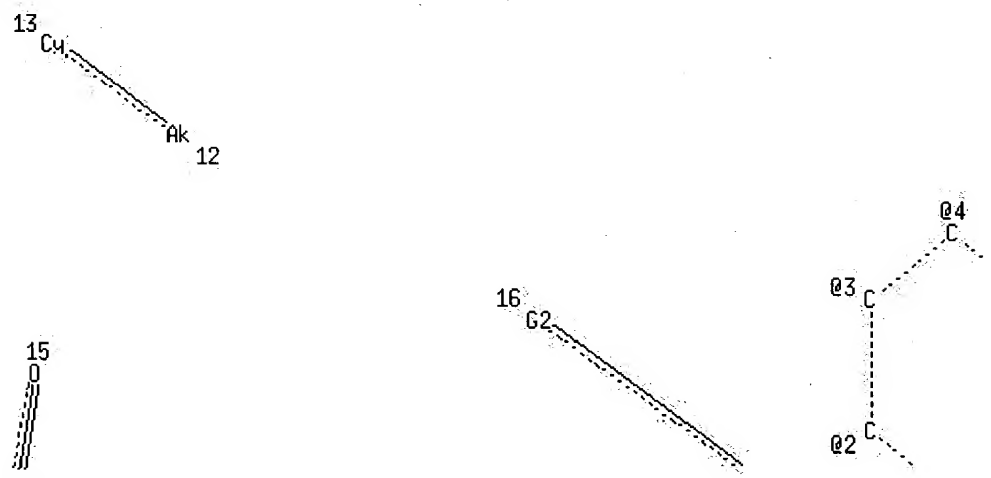
100.0% PROCESSED     567 ITERATIONS                          50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          9912 TO    12768
PROJECTED ANSWERS:              640 TO     1520

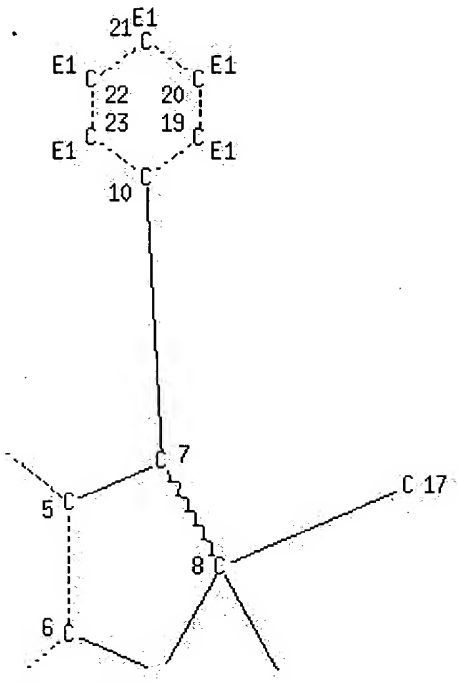
L2            50 SEA SSS SAM L1

=>
L3       STRUCTURE UPLOADED

=> d l3
L3 HAS NO ANSWERS
L3                STR
```

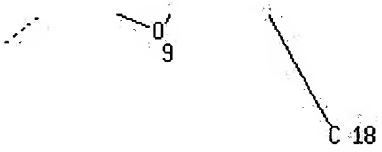


Page 1-A



Page 1-B

Page 2-A



Page 2-B

VAR G2=12/14

VPA 11-1/2/3/4 S

NODE ATTRIBUTES:

HCOUNT	IS E1	AT	19
HCOUNT	IS E1	AT	20
HCOUNT	IS E1	AT	21
HCOUNT	IS E1	AT	22
HCOUNT	IS E1	AT	23
NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS R	AT	7
NSPEC	IS R	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10
NSPEC	IS C	AT	11
NSPEC	IS C	AT	12
NSPEC	IS C	AT	13
NSPEC	IS C	AT	14

```
NSPEC   IS C      AT  15
NSPEC   IS C      AT  16
NSPEC   IS RC     AT  17
NSPEC   IS RC     AT  18
NSPEC   IS R      AT  19
NSPEC   IS R      AT  20
NSPEC   IS R      AT  21
NSPEC   IS R      AT  22
NSPEC   IS R      AT  23
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT  10 11 12 14 15 17 18 19 20 21 22 23
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  23

STEREO ATTRIBUTES: NONE


=> s l3
SAMPLE SEARCH INITIATED 17:34:17 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -     35 TO ITERATE

100.0% PROCESSED      35 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.05

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:          346 TO     1054
PROJECTED ANSWERS:               0 TO        0

L4             0 SEA SSS SAM L3

=> s l3 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 17:34:26 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -    625 TO ITERATE

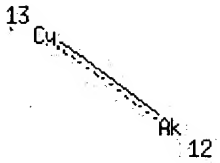
100.0% PROCESSED     625 ITERATIONS                               0 ANSWERS
SEARCH TIME: 00.00.01

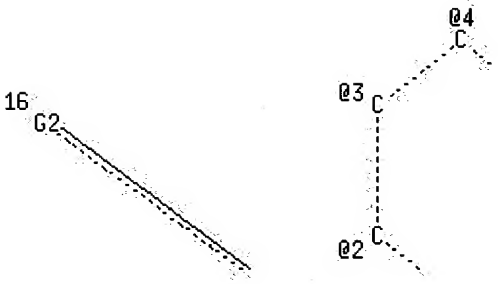
L5             0 SEA SSS FUL L3

=>
L6      STRUCTURE UPLOADED

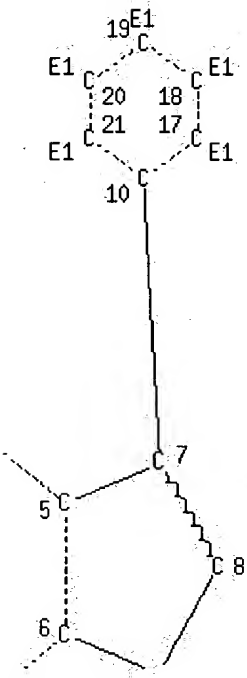
=> l6
L6 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> d l6
L6 HAS NO ANSWERS
L6              STR
```



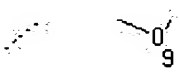


Page 1-A



Page 1-B

Page 2-A



Page 2-B

VAR G2=12/14
VPA 11-1/2/3/4 S
NODE ATTRIBUTES:
HCOUNT IS E1 AT 17
HCOUNT IS E1 AT 18
HCOUNT IS E1 AT 19
HCOUNT IS E1 AT 20

```
HCOUNT  IS E1     AT  21
NSPEC   IS R      AT   1
NSPEC   IS R      AT   2
NSPEC   IS R      AT   3
NSPEC   IS R      AT   4
NSPEC   IS R      AT   5
NSPEC   IS R      AT   6
NSPEC   IS R      AT   7
NSPEC   IS R      AT   8
NSPEC   IS R      AT   9
NSPEC   IS R      AT  10
NSPEC   IS C      AT  11
NSPEC   IS C      AT  12
NSPEC   IS C      AT  13
NSPEC   IS C      AT  14
NSPEC   IS C      AT  15
NSPEC   IS C      AT  16
NSPEC   IS R      AT  17
NSPEC   IS R      AT  18
NSPEC   IS R      AT  19
NSPEC   IS R      AT  20
NSPEC   IS R      AT  21
DEFAULT MLEVEL IS ATOM
MLEVEL  IS CLASS  AT  10 11 12 14 15 17 18 19 20 21
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC I
NUMBER OF NODES IS  21

STEREO ATTRIBUTES: NONE


=> s l6
SAMPLE SEARCH INITIATED 17:35:05 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -    561 TO ITERATE

100.0% PROCESSED     561 ITERATIONS                          7 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         9799 TO    12641
PROJECTED ANSWERS:               7 TO      298

L7             7 SEA SSS SAM L6

=> s l7 full
THE ESTIMATED SEARCH COST FOR FILE 'REGISTRY' IS 155.00 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N or END:y
FULL SEARCH INITIATED 17:35:11 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -  11713 TO ITERATE

100.0% PROCESSED   11713 ITERATIONS                         94 ANSWERS
SEARCH TIME: 00.00.01

L8            94 SEA SSS FUL L6

=> file hcaplus
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
```

	ENTRY	SESSION
FULL ESTIMATED COST	314.20	314.41

FILE 'HCAPLUS' ENTERED AT 17:35:14 ON 25 APR 2004
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FILE COVERS 1907 - 25 Apr 2004 VOL 140 ISS 18
FILE LAST UPDATED: 23 Apr 2004 (20040423/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> **s 18**
L9 37 L8

=> **s l9 and ohkawa, s?/au**
272 OHKAWA, S?/AU
L10 1 L9 AND OHKAWA, S?/AU

=> **d l10, ibib abs fhitstr, 1**

L10 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1998:806634 HCAPLUS
DOCUMENT NUMBER: 130:38285
TITLE: Benzofuran derivatives useful for suppressing neurodegeneration.
INVENTOR(S): **Ohkawa, Shigenori**; Setoh, Masaki; Kakihana, Mitsuru; Okura, Masahiro
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 132 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9855454	A2	19981210	WO 1998-JP2482	19980604
WO 9855454	A3	19990304		

W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

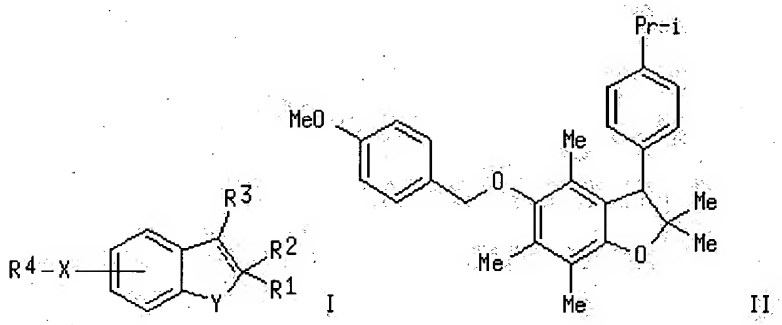
AU 9875503	A1	19981221	AU 1998-75503	19980604
JP 11049765	A2	19990223	JP 1998-155709	19980604
EP 988289	A2	20000329	EP 1998-923128	19980604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI

PRIORITY APPLN. INFO.: JP 1997-148325 19970605
WO 1998-JP2482 19980604

OTHER SOURCE(S): MARPAT 130:38285

GI

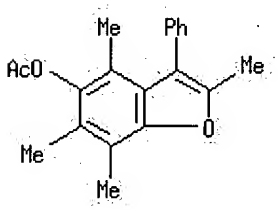


AB Title compds. I [R1, R2 = H, (un)substituted hydrocarbon group; or R1 and R2 form a 3- to 8-membered carbo- or heterocyclic ring which may be substituted; R3 = H, (un)substituted lower alkyl or arom. group; R4 = (un)substituted arom. or araliph. group, or acyl; X , Y = O or S which may be oxidized; benzene ring may be further substituted] and their salts are disclosed. The compds. suppress β-amyloid toxicity, and are thus useful as agents for treating of preventing neurodegenerative diseases such as Alzheimer's disease or Parkinsonism. Prepns. of 33 compds. I and their intermediates are described. For instance, etherification of 3-(4-isopropylphenyl)-2,2,4,6,7-pentamethyl-2,3-dihydrobenzofuran-5-ol with 4-methoxybenzyl chloride using NaH in DMF gave 49% title compd. II. Seven example compds. gave 27.3-47.0% in vitro protection of human neuroblastoma SK-N-SH cells from β-amyloid neurotoxicity.

IT **216989-59-2P**, 2,4,6,7-Tetramethyl-3-phenylbenzofuran-5-yl acetate
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(intermediate; prepn. of benzofuran derivs. as agents for suppressing neurodegeneration)

RN 216989-59-2 HCAPLUS

CN 5-Benzofuranol, 2,4,6,7-tetramethyl-3-phenyl-, acetate (9CI) (CA INDEX NAME)



=> d his

```
     (FILE 'HOME' ENTERED AT 17:29:12 ON 25 APR 2004)

     FILE 'REGISTRY' ENTERED AT 17:29:19 ON 25 APR 2004
L1                STRUCTURE UPLOADED
L2             50 S L1
L3                STRUCTURE UPLOADED
L4              0 S L3
L5              0 S L3 FULL
L6                STRUCTURE UPLOADED
L7              7 S L6
L8             94 S L7 FULL

     FILE 'HCAPLUS' ENTERED AT 17:35:14 ON 25 APR 2004
L9             37 S L8
L10             1 S L9 AND OHKAWA, S?/AU

=> s l9 not l10
L11            36 L9 NOT L10

=> s l11 and setoh, m?/au
               11 SETOH, M?/AU
L12             0 L11 AND SETOH, M?/AU

=> s l11 and kakihana, m?/au
              408 KAKIHANA, M?/AU
L13             0 L11 AND KAKIHANA, M?/AU

=> s l11 and okura, m?/au
               94 OKURA, M?/AU
L14             1 L11 AND OKURA, M?/AU

=> s l14 not l10
L15             1 L14 NOT L10

=> d l15, ibib abs fhitstr, 1

L15  ANSWER 1 OF 1  HCAPLUS  COPYRIGHT 2004 ACS on STN
```

Full Text | Citing References

ACCESSION NUMBER: 2002:275980 HCAPLUS
DOCUMENT NUMBER: 136:309840
TITLE: Preparation of heterocyclic compounds as promoters for the proliferation and differentiation of stem cells and neuron precursor cells
INVENTOR(S): Okawa, Shigenori; Miyamoto, Masaomi; **Okura, Masahiro**
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan
SOURCE: PCT Int. Appl., 182 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002028850	A1	20020411	WO 2001-JP8739	20011004

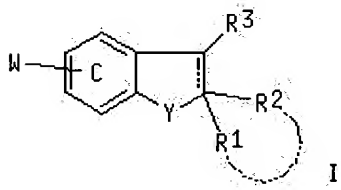
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT,

RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US,
UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2001092350	A5	20020415	AU 2001-92350	20011004
JP 2002348239	A2	20021204	JP 2001-308530	20011004
EP 1323716	A1	20030702	EP 2001-972687	20011004
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
US 2004034049	A1	20040219	US 2003-398278	20030401

PRIORITY APPLN. INFO.: JP 2000-306801 A 20001005
WO 2001-JP8739 W 20011004

OTHER SOURCE(S): MARPAT 136:309840
GI

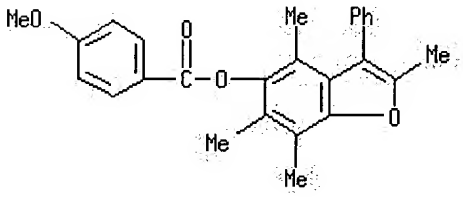


I

AB The title compds. I [R1 and R2 are each H, a hydrocarbon group, a heterocyclic group, or R1 and R2 together with the carbon atom adjacent thereto may form a ring; R3 is H, a hydrocarbon group, or a heterocyclic group; W is R4R5N, etc.; R4 is acyl which is substituted with an arom. group and addnl. bears an optionally substituted aliph. hydrocarbon group or an arom. group; R5 is H, C1-6 alkyl, or acyl; Y is O, S, or NH; and ring C is an optionally substituted benzene ring] are prepd. Three compds. of this invention at 1 μM gave 344% to 478% promotion of neuron generation. Formulations are given.

IT **216989-42-3P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of heterocyclic compds. as promoters for proliferation and differentiation of stem cells and neuron precursor cells)

RN 216989-42-3 HCAPLUS
CN Benzoic acid, 4-methoxy-, 2,4,6,7-tetramethyl-3-phenyl-5-benzofuranyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> **d his**

(FILE 'HOME' ENTERED AT 17:29:12 ON 25 APR 2004)

```
     FILE 'REGISTRY' ENTERED AT 17:29:19 ON 25 APR 2004
L1                STRUCTURE UPLOADED
L2             50 S L1
L3                STRUCTURE UPLOADED
L4              0 S L3
L5              0 S L3 FULL
L6                STRUCTURE UPLOADED
L7              7 S L6
L8             94 S L7 FULL

     FILE 'HCAPLUS' ENTERED AT 17:35:14 ON 25 APR 2004
L9             37 S L8
L10             1 S L9 AND OHKAWA, S?/AU
L11            36 S L9 NOT L10
L12             0 S L11 AND SETOH, M?/AU
L13             0 S L11 AND KAKIHANA, M?/AU
L14             1 S L11 AND OKURA, M?/AU
L15             1 S L14 NOT L10

=> s l11 and l15
L16             1 L11 AND L15

=> s l11 not l15
L17            35 L11 NOT L15

=> d l17, ibib abs fhitstr, 1-35

L17  ANSWER 1 OF 35  HCAPLUS  COPYRIGHT 2004 ACS on STN
```

Full Text | Citing References

```
ACCESSION NUMBER:          2004:252494  HCAPLUS
DOCUMENT NUMBER:           140:287404
TITLE:                     Preparation of five-membered heterocyclic compounds
                           for treatment of obesity, diabetes, hyperlipidemia,
                           etc.
INVENTOR(S):               Momose, Yu; Takakura, Nobuyuki; Maekawa, Tsuyoshi;
                           Odaka, Hiroyuki; Kimura, Hiroyuki
PATENT ASSIGNEE(S):        Takeda Chemical Industries, Ltd., Japan
SOURCE:                    PCT Int. Appl., 442 pp.
                           CODEN: PIXXD2
DOCUMENT TYPE:             Patent
LANGUAGE:                  Japanese
FAMILY ACC. NUM. COUNT:    1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     WO 2004024705      A1   20040325      WO 2003-JP11511  20030909
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS,
             LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,
             TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG,
             KZ, MD, RU, TJ
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
             GW, ML, MR, NE, SN, TD, TG
     JP 2004123732      A2   20040422      JP 2003-316475   20030909
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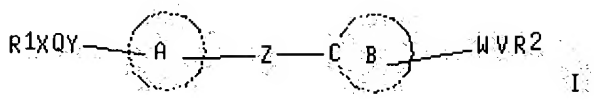
PRIORITY APPLN. INFO.: JP 2002-264703 A 20020910
GI



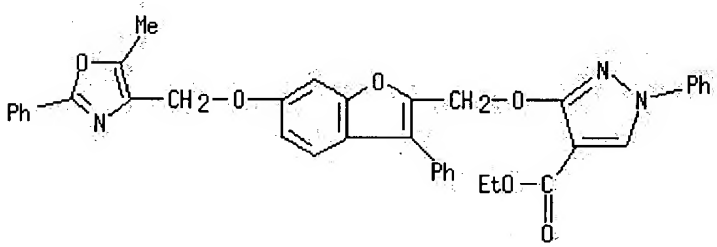
I

AB The title compds. I [R1 is a group derived from an optionally substituted five-membered heterocycle; X, Y and V are each independently oxygen, sulfur, or the like; Q is a divalent hydrocarbon group having 1 to 20 carbon atoms; A is an arom. ring which may have one to three addnl. substituents; Z is (CH2)nZ1 or Z1(CH2)n (wherein n is an integer of 0 to 8 and Z1 is oxygen, sulfur, or the like); B is a nitrogenous heterocycle which may have one to three addnl. substituents; W is a bond or a divalent hydrocarbon group having 1 to 20 carbon atoms; and R2 is hydrogen, cyano, PO(OR9)(OR10) (wherein R9 and R10 are each independently hydrogen or optionally substituted hydrocarbyl, or R9 and R10 may be united to form an optionally substituted ring), or the like] are prepd. In a binding assay for the human PPAR γ1 receptors , compds. of this invention showed IC50 values of 7.4 nM to 7300 nM. Formulations are given.

IT **675143-95-0P**
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of five-membered heterocyclic compds. for treatment of obesity, diabetes, hyperlipidemia, etc.)

RN 675143-95-0 HCAPLUS

CN 1H-Pyrazole-4-carboxylic acid, 3-[[6-[(5-methyl-2-phenyl-4-oxazolyl)methoxy]-3-phenyl-2-benzofuranyl]methoxy]-1-phenyl-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 2 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2002:964313 HCAPLUS
DOCUMENT NUMBER: 138:55745
TITLE: Preparation of substituted 3-phenyl-2-alkoxypropanoic acids and analogs as modulators of peroxisome proliferator activated receptors for treatment of diabetes and related conditions
INVENTOR(S): Brooks, Dawn Alisa; Warshawsky, Alan M.; Montrose-Rafezadeh, Chahrzad; Reifel-Miller, Anne; Prieto, Lourdes; Rojo, Isabel; Martin, Jose Alfredo; Gonzales Garcia, Maria Rosario; Torrado, Alicia; Ferritto Crespo, Rafael; Lamas-Peteira, Carlos; Martin-Ortega Finger, Maria; Ardecky, Robert J.

PATENT ASSIGNEE(S): Eli Lilly and Company, USA; Ligand Pharmaceuticals Incorporated
SOURCE: PCT Int. Appl., 458 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002100813	A2	20021219	WO 2002-US16950	20020530
WO 2002100813	A3	20031127		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

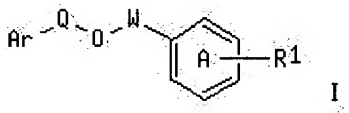
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1392637	A2	20040303	EP 2002-739503	20020530

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2001-297144P P 20010607
WO 2002-US16950 W 20020530

OTHER SOURCE(S): MARPAT 138:55745
GI



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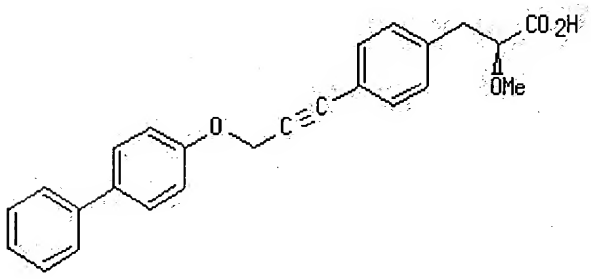


II

AB Title compds. I [wherein Ar = (un)substituted aryl; Q = covalent bond, CH2, CH2CH2, CH2CH2CH2, or CH2CH2CH2CH2; W = (un)substituted (hetero)alkylene from 2-10 atoms in length in which 1 or more methylene groups have been replaced with CH=CH, C≡C, O, CO, NR7, NR7CO, C(=NOH), S, SO, SO2, or CHNR7R8; ring A is optionally substituted with up to 4 substituents in addn. to R1; R1 = (CH2)nCH(OR2)(CH2)mE, CH=C(OR2)(CH2)mE, (CH2)nCHY(CH2)mE, or CH=CY(CH2)mE; E = CO2R3, alkylnitrile, carboxamide, or (un)substituted sulfonamide, acylsulfonamide, or tetrazole; R2 = H, haloalkyl, COR4, CO2R4, CONR5R6, CSR4, CSOR4, CSNR5R6, or (un)substituted aliph. group, aralkyl, or aryl; Y

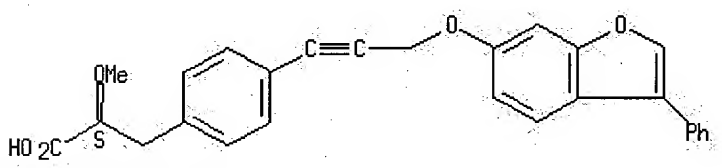
= O, CH2, CH2CH2, or CH=CH bonded ortho to R1 on ring A; R3-R8 = independently H or (un)substituted aliph. group or aryl; m and n = independently 0-2; or pharmaceutically acceptable salts, hydrates, stereoisomers, or solvates thereof] were prepd. by soln. phase and solid phase synthetic methods as peroxisome proliferator activated receptor (PPAR) modulators (no data). For example, (S)-2-methoxy-3-hydroxyphenylpropanoic acid Et ester was treated with Ph triflimide to give the 4-trifluoromethanesulfonyloxyphenyl deriv. (97%). Substitution with propargyl alc. in the presence of PdCl2(PPh3)2 and TEA in DMF afforded the 4-(3-hydroxyprop-1-ynyl)phenyl intermediate (32%), which was coupled with 4-phenylphenol using the Mitsunobu procedure to give II. Binding and cotransfection studies showed that many of the compds. of the invention are selective PPARγ agonists or PPARα/PPARγ co-agonists (no data). Thus, I are useful for the treatment of hyperglycemia, dyslipidemia, Type I or II diabetes, hypertriglyceridemia, syndrome X, insulin resistance, heart failure, diabetic dyslipidemia, hyperlipidemia, hypercholesteremia, hypertension, obesity, anorexia bulimia, polycystic ovarian syndrome, anorexia nervosa, cardiovascular disease or other diseases where insulin resistance is a component (no data).

IT **477979-25-2P**, (2S)-2-Methoxy-3-[4-[3-(3-phenylbenzofuran-6-yloxy)prop-1-ynyl]phenyl]propionic acid
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(PPAR modulator; prepn. of substituted (phenyl)(alkoxy)propanoic acids and analogs as PPAR modulators for treatment of diabetes and related conditions)

RN 477979-25-2 HCAPLUS

CN Benzenepropanoic acid, α-methoxy-4-[3-[(3-phenyl-6-benzofuranyl)oxy]-1-propynyl]-, (αS)- (9CI) (CA INDEX NAME)

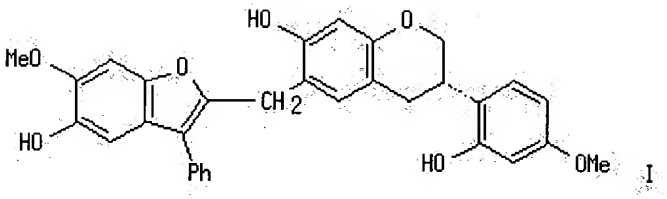
Absolute stereochemistry.



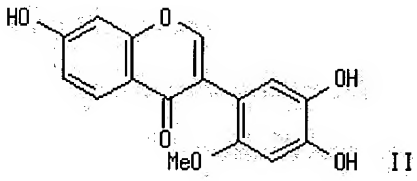
L17 ANSWER 3 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2002:106372 HCAPLUS
DOCUMENT NUMBER: 137:44206
TITLE: An isoflavanoid-neoflavonoid and an O-methylated isoflavone from the heartwood of Dalbergia nitidula
AUTHOR(S): Bekker, Madelyn; Malan, Elfranco; Steenkamp, Jacobus A.; Brandt, E. Vincent
CORPORATE SOURCE: Department of Chemistry, University of the Orange Free State, Bloemfontein, 9300, S. Afr.
SOURCE: Phytochemistry (2002), 59(4), 415-418
CODEN: PYTCAS; ISSN: 0031-9422
PUBLISHER: Elsevier Science Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I



II

AB An isoflavanoid (6→2) neoflavonoid dimer (I) and a 4',5',7-trihydroxy-2'-methoxyisoflavone (II) , both as the acetate derivs. were isolated from the heartwood of Dalbergia nitidula. Their structures were established by spectroscopic methods.

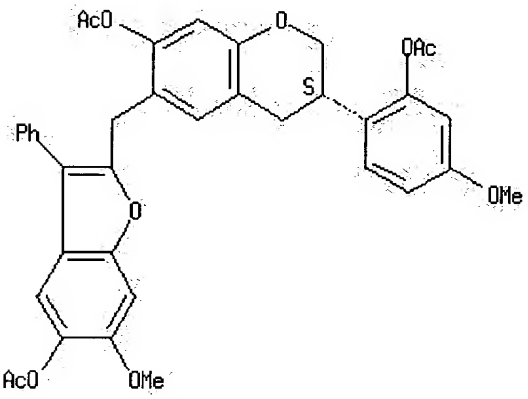
IT **438000-83-0P**

RL: PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); PREP (Preparation)
(isoflavanoid-neoflavonoid and O-methylated isoflavone from Dalbergia nitidula)

RN 438000-83-0 HCAPLUS

CN 2H-1-Benzopyran-7-ol, 3-[2-(acetyloxy)-4-methoxyphenyl]-6-[[5-(acetyloxy)-6-methoxy-3-phenyl-2-benzofuranyl]methyl]-3,4-dihydro-, acetate, (3S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 2001:465174 HCAPLUS

DOCUMENT NUMBER: 135:226908

TITLE: Synthesis of 2,3-diphenyl-5-methyl-6-aroylbenzo[1,2-b:5,4-b']difurans under PTC conditions and their anti-microbial activity

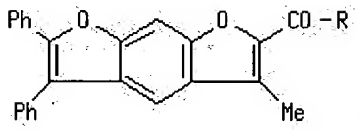
AUTHOR(S): Reddy, Y. Thirupathi; Reddy, P. Narsimha; Rao, M. Kanakalingeswara; Rajitha, B.; Reddy, S. M.; Sridevi,

Ms

CORPORATE SOURCE: Department of Chemistry, Regional Engineering College, Warangal, 506 004, India

SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (2001), 40B(6), 479-483
CODEN: IJSBDB; ISSN: 0376-4699
PUBLISHER: National Institute of Science Communication, CSIR
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 135:226908

GI

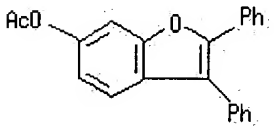


I

AB 2,3-Diphenyl-6-hydroxybenzofuran 1 and 2,3-diphenyl-5-acetyl-6-hydroxybenzofuran 3 were synthesized under microwave irradn. in much higher yields than previously reported. 2,3-Diphenyl-5-acetyl-6-aroylbenzo[1,2-b:5,4-b']difurans I (R = C6H4X-4, X = H 5a, Me 5b, NO2 5c, Br 5d, Cl 5e, Ph 5f, OMe 5h; R = 4-methoxynaphthyl 5g) were synthesized from the reaction of 3 and phenacyl bromides BrCH2COR 4a-h (same R) under PTC conditions using Bu4NHSO4 as a catalyst in 65-85% yields. Reaction of 5h (R = C6H4OMe-4) with pyridine hydrochloride gave 75% demethylated deriv. I (6a), which when treated with chloroethyl-substituted tertiary amine hydrochloride salts gave the corresponding I (R = C6H4OR1-4, R1 = CH2CH2NEt2 6b, 2-morpholinoethyl 6c, 2-piperidinoethyl 6d, 2-pyrrolidinoethyl 6e) in 75-85% yields. The compds. 5a-h and 6a-e were screened for antibacterial and antifungal activities. Compds. 5b and 5e showed max. inhibitory activity against E. coli and S. aureus, while compds. 5b, 5e-g and 6a show max. spore germination inhibition against Fusarium moniforme.

IT **358971-59-2P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and improved Fries migration in, in presence of microwave irradn.)

RN 358971-59-2 HCAPLUS
CN 6-Benzofuranol, 2,3-diphenyl-, acetate (9CI) (CA INDEX NAME)



REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 5 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1999:133708 HCAPLUS
DOCUMENT NUMBER: 130:337970
TITLE: Intra- and intermolecular photocyclization of vinylbenzo-1,4-quinones
AUTHOR(S): Iwamoto, Hidetoshi; Takuwa, Akio; Hamada, Kensaku;

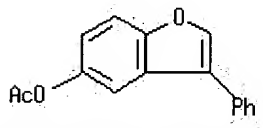
Fujiwara, Ryuji
CORPORATE SOURCE: Department of Material Science, Faculty of Science and Engineering, Shimane Univ., Matsue, 690-8504, Japan
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1999), (5), 575-582
CODEN: JCPRB4; ISSN: 0300-922X
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 130:337970
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The photochem. reactions of a variety of vinylbenzo-1,4-quinones have been investigated. Irradn. of a benzene soln. of 2-methyl-5-(1-phenylvinyl)benzo-1,4-quinone affords quant. a benzofuranol I via intramol. cyclization, while the styryl deriv. II (R1 = Ph, 4-ClC6H4, Me) gives a novel dimer III by way of intermol. (4 + 2) cycloaddn. In contrast to these two quinones, the (2,2-diphenylvinyl) deriv. IV (R1 = Me, R2 = Ph; R1 = R2 = Me; R1 = H, R2 = Ph) gives a phenanthrene-1,4-quinone V via a stilbene-like photocyclization. The reaction paths of these intra- and intermol. photochem. reactions are also discussed.

IT **59288-02-7P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(photocyclization of vinylbenzoquinones to give benzofurans, dimers, and phenanthrenes and generation of methanol adducts for mechanism proof)

RN 59288-02-7 HCAPLUS
CN 5-Benzofuranol, 3-phenyl-, acetate (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 6 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1998:479409 HCAPLUS
DOCUMENT NUMBER: 129:100023
TITLE: Antidiabetic agents
INVENTOR(S): Adams, Alan D.; Von Langen, Derek; Tolman, Richard L.; Koyama, Hiroo
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 110 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9827974	A1	19980702	WO 1997-US23646	19971219
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9856152	A1	19980717	AU 1998-56152	19971219
AU 719663	B2	20000511		
EP 948327	A1	19991013	EP 1997-952573	19971219
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
US 6090839	A	20000718	US 1997-994123	19971219
JP 2001511767	T2	20010814	JP 1998-529016	19971219
US 6160000	A	20001212	US 1999-331512	19990622
US 6515015	B1	20030204	US 2000-695009	20001024

PRIORITY APPLN. INFO.:	US 1996-34432P	P	19961223
	GB 1997-5857	A	19970321
	US 1997-60113P	P	19970926
	WO 1997-US23646	W	19971219
	US 1999-331512	A3	19990622

OTHER SOURCE(S): MARPAT 129:100023

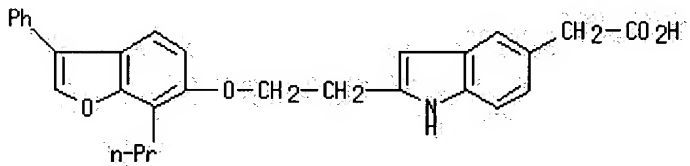
AB The instant invention is concerned with aryl and heteroaryl oxyacetic acid type compds. which are useful antidiabetic compds. Compns. and methods for the use of the compds. in the treatment of diabetes and related diseases and for lowering triglyceride levels are also disclosed. Among the 20 compds. prepd. by std. methods were 2-[2-(3-phenyl-7-propylbenzofuran-6-yloxy)ethyl]indole-5-acetic acid, 2-[2-(4-phenoxy-2-propylphenoxy)ethyl]indole-5-acetic acid sodium salt, and 2-[2-(3-phenyl-7-propylbenz[4,5]isoxazol-6-yloxy)ethyl]-4,5,6,7-tetrahydronaphtho[2,1-b]furan-7-carboxylic acid.

IT **209808-48-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(prepn. and biol. activity of aryl- and heteroaryloxyacetate antidiabetic agents)

RN 209808-48-0 HCAPLUS

CN 1H-Indole-5-acetic acid, 2-[2-[(3-phenyl-7-propyl-6-benzofuranyl)oxy]ethyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 7 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1997:446485 HCAPLUS

DOCUMENT NUMBER: 127:156260

TITLE: Benzofuran derivatives as ETA-selective, non-peptide

endothelin antagonists

AUTHOR(S): Kaltenbronn, J. S.; Quin, J., III; Reisdorph, B. R.; Klutchko, S.; Reynolds, E. E.; Welch, K. M.; Flynn, M. A.; Doherty, A. M.

CORPORATE SOURCE: Department of Chemistry, Parke-Davis Pharmaceutical Research, Ann Arbor, MI, 48105, USA

SOURCE: European Journal of Medicinal Chemistry (1997), 32(5), 425-431
CODEN: EJMCA5; ISSN: 0223-5234

PUBLISHER: Elsevier

DOCUMENT TYPE: Journal

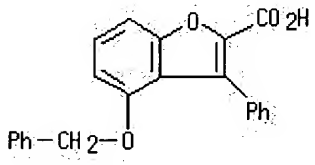
LANGUAGE: English

AB The synthesis and SAR relationships of a series of 4-benzyloxy-3-methylbenzofuran-2-carboxylic acids are described. Compds. from this series show 2- to 16-fold selective binding to the ETA receptor in the micromolar range, and two compds. from this series were demonstrated to exhibit ETA antagonist activity.

IT **193738-45-3P**
RL: BPR (Biological process); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(benzofuran deriv. prepn. and endothelin receptor affinity)

RN 193738-45-3 HCAPLUS

CN 2-Benzofurancarboxylic acid, 3-phenyl-4-(phenylmethoxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 8 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1995:539887 HCAPLUS

DOCUMENT NUMBER: 123:280971

TITLE: Oligomeric isoflavonoids. Part 3. Daljanelins A-D, the first pterocarpan- and isoflavanoid-neoflavonoid analogs

AUTHOR(S): Ferreira, J. Albert; Nel, Janetta W.; Brandt, Vincent; Bezuidenhoudt, Barend C. B.; Ferreira, Daneel

CORPORATE SOURCE: Dep. Chem., Univ. Orange Free State, Bloemfontein, 9300, S. Afr.

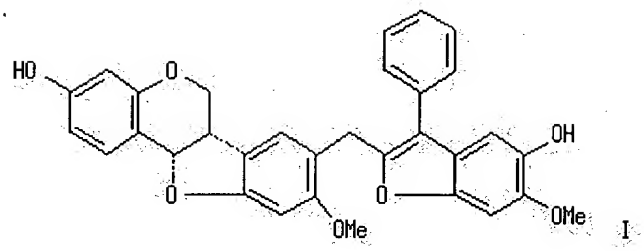
SOURCE: Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry (1995), (8), 1049-56
CODEN: JCPRB4; ISSN: 0300-922X

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



I

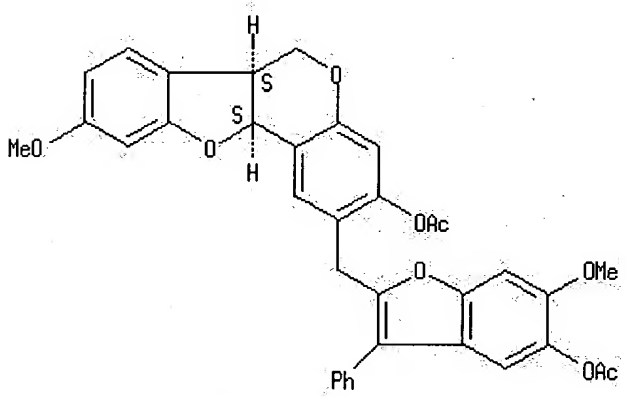
AB The structures of daljanelins A, B, and C (I), the first pterocarpan-neoflavonoid oligomers, and of daljanelin D, a related isoflavonoid-neoflavonoid analog, from Dalbergia nitidula were established by spectroscopic methods. The structure and stereochem. of I were unambiguously confirmed by synthesis via introduction of an electrophilic C-1 fragment to a pterocarpan nucleus followed by anionic coupling of a C6·C2 precursor and the late introduction of the final C6 fragment by a Grignard reaction.

IT **163980-41-4P**, Daljanelin A diacetate
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR spectrum of)

RN 163980-41-4 HCAPLUS

CN 6H-Benzofuro[3,2-c][1]benzopyran-3-ol, 2-[[5-(acetyloxy)-6-methoxy-3-phenyl-2-benzofuranyl]methyl]-6a,11a-dihydro-9-methoxy-, acetate, (6aS-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L17 ANSWER 9 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1994:557632 HCAPLUS
DOCUMENT NUMBER: 121:157632
TITLE: Benzofuranone and benzodifurantrione derivatives and process for the preparation of benzodifuranones
INVENTOR(S): Hughes, Nigel; Newton, David Francis; Milner, David John; Deboos, Gareth Andrew
PATENT ASSIGNEE(S): Zeneca Ltd., UK
SOURCE: PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9412501	A1	19940609	WO 1993-GB2318	19931111
W: JP, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 669922	A1	19950906	EP 1993-924741	19931111
EP 669922	B1	19970820		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
JP 08510441	T2	19961105	JP 1994-512873	19931111
JP 3187837	B2	20010716		
ES 2105346	T3	19971016	ES 1993-924741	19931111
US 5625080	A	19970429	US 1995-446638	19950525
US 5717112	A	19980210	US 1996-764755	19961212

PRIORITY APPLN. INFO.:	GB 1992-24647	A	19921125
	GB 1992-24649	A	19921125
	GB 1993-1422	A	19930125
	WO 1993-GB2318	W	19931111
	US 1995-446638	A3	19950525

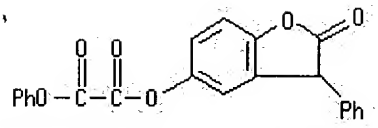
OTHER SOURCE(S): CASREACT 121:157632; MARPAT 121:157632
GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Claims include benzodifurantriones I [W = (un)substituted aryl], their intermediates II [X = halo, alkoxy, OH, NH2, (di)alkylamino], derived compds. III [R3 = H, COR2, SO2R2; R2 = alkyl, cycloalkyl, aryl, or aralkyl; R4 = CO2R2, CONRR1, CO2H or salts, COX2; R, R1 = H, alkyl, cycloalkyl, aryl or aralkyl; X2 = halo], and processes for prepg. I from hydroxydihydrobenzofuran derivs. IV, directly or via II, for prepg. III from I, and for conversion of either I or III into benzodifurandiones V [Y = electron-rich activating group; optionally addnl. substituents]. I, II, and III are useful as intermediates for dyes, agrochems., and pharmaceuticals, and V may be used as dyes (no data). Examples (32) cover prepns. and interconversions of numerous compds. I-III and V. For instance, reaction of IV (W = Ph) with oxalyl chloride and DMAP in refluxing CH2Cl2, followed by addn. of Et3N and further refluxing, gave 94.6% I (W = Ph). Alternatively, use of pyridine instead of DMAP led to isolation of the intermediate chloride ester II (W = Ph, X = Cl), which was esterified with PhOH to give 89% II (W = Ph, X = OPh). Cyclization of this with Et3N in CH2Cl2 also gave I (W = Ph). The latter then reacted with various elec. activated aroms., such as PhNHEt in refluxing AcOH-H2SO4, to give a variety of V (W = Ph, e.g. Y = NHEt) in 35-100% yield. I (W = Ph) also underwent hydrolysis by dil. NaOH to give III (W = Ph, R3 = H, R4 = CO2H), which reacted with PhOH and p-MeC6H4SO3H in refluxing 1,2-C6H4Cl2 to give V (W = Ph, Y = OH).

IT **157462-54-9P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and cyclization of)

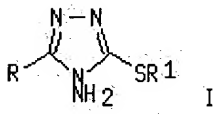
RN 157462-54-9 HCAPLUS
CN Ethanedioic acid, 2,3-dihydro-2-oxo-3-phenyl-5-benzofuranyl phenyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 10 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

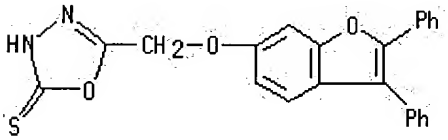
ACCESSION NUMBER: 1992:235536 HCAPLUS
DOCUMENT NUMBER: 116:235536
TITLE: Synthesis of a new type of 5-heteroaryl-3-thio-4-amino-1,2,4-triazoles and their derivatives
AUTHOR(S): Ratnakar, A.; Reddy, R. Buchi; Mouli, G. V. P. Chandra; Reddy, Y. D.
CORPORATE SOURCE: Dep. Chem., Reg. Eng. Coll., Warangal, 506 004, India
SOURCE: Asian Journal of Chemistry (1992), 4(2), 197-200
CODEN: AJCHEW; ISSN: 0970-7077
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB A series of 4-amino-3-substituted mercapto-5-aryl/heteroaryl-1,2,4-triazoles I (R = 4-methylcoumarin-7-yloxymethyl, 4-pyridyl, benzoxazol-2-ylthiomethyl, etc., R1 = H, Me, Et, Ac) have been prepd. by reaction of the corresponding 1,3,4-oxadiazoles with hydrazine hydrate in alc. The compds. were screened for their antimicrobial properties.

IT **141334-08-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(condensation of, with hydrazine)
RN 141334-08-9 HCAPLUS
CN 1,3,4-Oxadiazole-2(3H)-thione, 5-[[(2,3-diphenyl-6-benzofuranyl)oxy]methyl]- (9CI) (CA INDEX NAME)

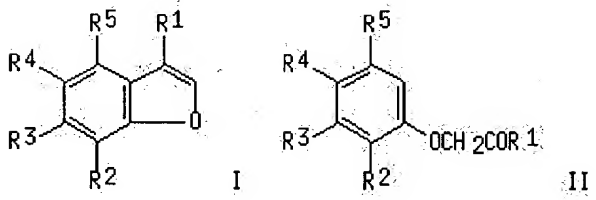


L17 ANSWER 11 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1991:206915 HCAPLUS
DOCUMENT NUMBER: 114:206915
TITLE: Facile cyclodehydration of α-aryloxy ketones with zeolites
AUTHOR(S): Chen, Zitao; Wang, Xiaoyan; Lu, Wanfang; Yu, Jian
CORPORATE SOURCE: Dep. Chem., Nanjing Univ., Nanjing, 210008, Peop. Rep. China
SOURCE: Synlett (1991), (2), 121-2
CODEN: SYNLES; ISSN: 0936-5214
DOCUMENT TYPE: Journal

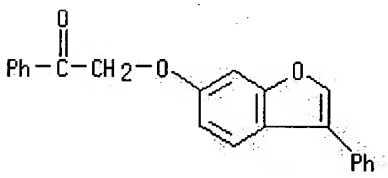
LANGUAGE: English
OTHER SOURCE(S): CASREACT 114:206915
GI



AB 3-Substituted benzofurans, e.g., I (R1 = Ph, Me; R2 = R4 = R5 = H, R3 = Me, OMe, OEt; R2R3 = CH:CHCH:CH, R4 = R5 = H; R2 = R3 = H, R4R5 = CH:CHCH:CH; R2 = R5 = H, R3R4 = CH:CHCH:CH), which are difficult to obtain directly by previous methods have been synthesized by zeolite (HY type) catalyzed cyclization of α-aryloxy ketones II. The reactions are highly regioselective in favor of the 3-substituted isomers in most cases.

IT **102468-55-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(zeolite-catalyzed cyclization of, benzofuran deriv. from)

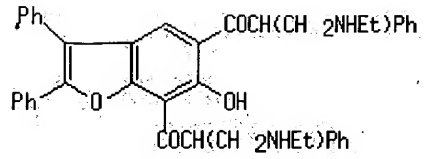
RN 102468-55-3 HCAPLUS
CN Ethanone, 1-phenyl-2-[(3-phenyl-6-benzofuranyl)oxy]- (9CI) (CA INDEX NAME)



L17 ANSWER 12 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1990:611739 HCAPLUS
DOCUMENT NUMBER: 113:211739
TITLE: Some reactions of 2,3-diphenyl-5,7-bis(phenylacetyl)-6-hydroxybenzofuran
AUTHOR(S): Hishmat, O. H.; Abd-El Rahman, A. H.; El Diwany, H. I.; Abu-Bakr, S. M.
CORPORATE SOURCE: Chem. Natl. Prod. Dep., Natl. Res. Cent., Cairo, Egypt
SOURCE: Egyptian Journal of Chemistry (1989), Volume Date 1987, 30(5), 413-20
CODEN: EGJCA3; ISSN: 0367-0422
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 113:211739
GI



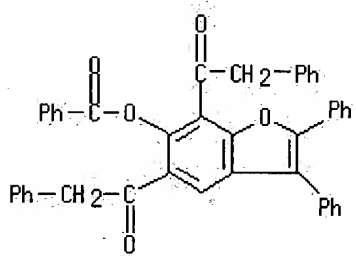
I

AB Derivs. of 2,3-diphenyl-5,7-bis(phenacetyl)-6-hydroxybenzofuran, e.g., oxime, Mannich bases, Schiff bases, hydrazone, were prepd. and tested for antimicrobial activity. Only the Mannich base I showed moderate activity.

IT **130284-62-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and antimicrobial activity of)

RN 130284-62-7 HCAPLUS

CN Ethanone, 1,1'-[6-(benzoyloxy)-2,3-diphenyl-5,7-benzofurandiyl]bis[2-phenyl- (9CI) (CA INDEX NAME)

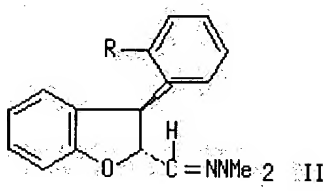


L17 ANSWER 13 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER:	1990:440366 HCAPLUS
DOCUMENT NUMBER:	113:40366
TITLE:	Lewis acid-catalyzed reactions of α,β-unsaturated N,N-dimethylhydrazones with 1,4-benzoquinone. Formation of indoles by a novel oxidative rearrangement
AUTHOR(S):	Echavarren, Antonio M.
CORPORATE SOURCE:	Inst. Quim. Org., CSIC, Madrid, 28006, Spain
SOURCE:	Journal of Organic Chemistry (1990), 55(14), 4255-60 CODEN: JOCEAH; ISSN: 0022-3263
DOCUMENT TYPE:	Journal
LANGUAGE:	English
OTHER SOURCE(S):	CASREACT 113:40366

GI



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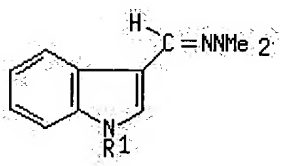


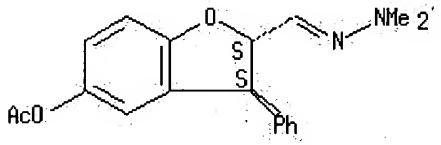
III

AB The Diels-Alder reaction of quinones and (E)-o-RC6H4CH:CHCH:NNMe2 (I; R = H, MeO, AcNH, BzNH) only proceeds with I (R = H) and 1,4-naphthoquinone as the dienophile. The addn. of Lewis acids leads to the formation of trans-2,3-dihydrobenzofurans II (R = H, MeO) in a highly regioselective [3

+ 2] process. When I (R = AcNH, BzNH) were allowed to react with 1,4-benzoquinone and BF3.OEt2, an unprecedented oxidative rearrangement took place yielding indolecarboxaldehyde N,N-dimethylhydrazones III (R1 = Ac, Bz).

IT **127280-21-1P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and NMR of)
RN 127280-21-1 HCAPLUS
CN 2-Benzofurancarboxaldehyde, 5-(acetyloxy)-2,3-dihydro-3-phenyl-, 2-(dimethylhydrazone), trans- (9CI) (CA INDEX NAME)

Relative stereochemistry.
Double bond geometry unknown.



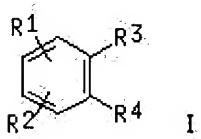
L17 ANSWER 14 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1990:98385 HCAPLUS
DOCUMENT NUMBER: 112:98385
TITLE: Benzofurans and chromenes as drugs for treating allergy and wound, and their preparation
INVENTOR(S): Kato, Koji; Ishitoku, Takeshi; Imuda, Junichi; Nakamura, Hideo; Motoyoshi, Satoru
PATENT ASSIGNEE(S): Mitsui Petrochemical Industries, Ltd., Japan; Dainippon Pharmaceutical Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01199957	A2	19890811	JP 1988-24651	19880204

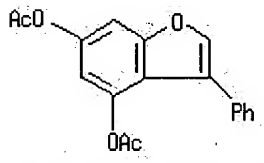
PRIORITY APPLN. INFO.: JP 1988-24651 19880204
OTHER SOURCE(S): MARPAT 112:98385
GI



I

AB The title compds. I [R1, R2 = acyloxy, trimethylsilyloxy, H; R3R4 = C(R5):C(CH2OR6)O, C(R5):C(R6)O, etc.; R5 = H, lower alkyl; R6 = lower acyl, trimethylsilyl], useful as allergy inhibitors and drugs for the treatment of wound, were prepd. Sapon. and demethylation of 2-carboethoxy-5-methoxy-3-methylbenzofuran (prepn. given), followed by acetylation, gave 5-acetoxy-2-carboxy-3-methylbenzofuran (II). Topical administration of II (1 mg/auricle) gave 25.3% inhibition of edema resulting from oxazolone sensitization in mice.

IT 125300-60-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as allergy inhibitor and drug for treating wound)
RN 125300-60-9 HCAPLUS
CN 4,6-Benzofurandiol, 3-phenyl-, diacetate (9CI) (CA INDEX NAME)



L17 ANSWER 15 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1985:615151 HCAPLUS
DOCUMENT NUMBER: 103:215151
TITLE: Lipoxygenase inhibitors
INVENTOR(S): Atkinson, Joseph G.; Guindon, Yvan; Lau, Cheuk K.
PATENT ASSIGNEE(S): Merck Frosst Canada, Inc., Can.
SOURCE: Eur. Pat. Appl., 183 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 7
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 146243	A1	19850626	EP 1984-307482	19841030
R: CH, DE, FR, GB, IT, LI, NL				
JP 60112783	A2	19850619	JP 1984-228052	19841031
CA 1281329	A1	19910312	CA 1984-466740	19841031
US 4745127	A	19880517	US 1987-1262	19870107
US 4822803	A	19890418	US 1988-152215	19880204
US 4933351	A	19900612	US 1989-303784	19890130

PRIORITY APPLN. INFO.:

US 1983-547508	A	19831031
US 1984-584061	A1	19840227
US 1984-661645	A2	19841017
US 1985-725265	A3	19850419
US 1985-800624	A2	19851121
US 1987-1262	A3	19870107
US 1988-152215	A3	19880204

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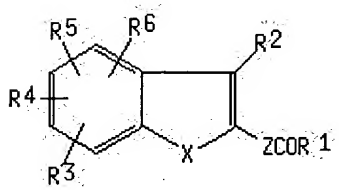

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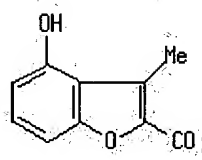


II

AB Benzofurans and benzothiophenes I [R1 = H, OH, (un)substituted alkoxy, amino, arylthio, aryloxy, heterocyclyl, etc.; R2-R6 = H, (un)substituted alkyl, amido, amino, heterocyclyl, etc.; X = O, S, S(O), S(O)2; Z = bond, (un)substituted CH:CH, CH2CH2] (>300 compds.), useful as leukotriene inhibitors, antiasthmatics, and analgesics, were prepd. Thus,

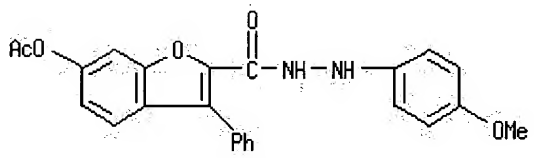
2,6-(HO)2C6H3Ac was treated with EtO2CCH2Br to give 3,2-(HO)AcC6H3OCH2CO2Et, which underwent cyclization to form benzofurancarboxylate II. At 5 mg/kg i.v. in asthmatic rats, II decreased the duration of asthmatic symptoms following exposure to an aerosol of egg albumin by 38%.

IT **99245-94-0P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as lipoxygenase inhibitor)

RN 99245-94-0 HCAPLUS

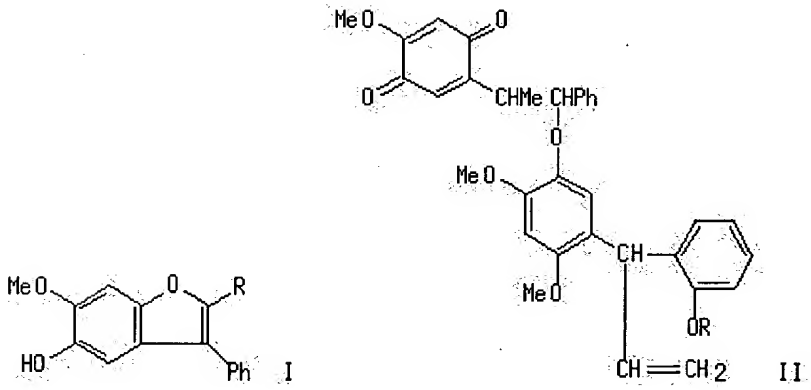
CN 2-Benzofurancarboxylic acid, 6-(acetyloxy)-3-phenyl-, 2-(4-methoxyphenyl)hydrazide (9CI) (CA INDEX NAME)



L17 ANSWER 16 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

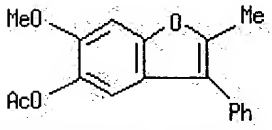
Full Text | Citing References

ACCESSION NUMBER:	1982:159270 HCAPLUS
DOCUMENT NUMBER:	96:159270
TITLE:	New neoflavonoid structural-types from Dalbergia
AUTHOR(S):	Donnelly, Dervilla M. X.; Criodain, Thurloch O.; O'Sullivan, Michael
CORPORATE SOURCE:	Dep. Chem., Univ. Coll., Dublin, 4, Ire.
SOURCE:	Journal of the Chemical Society, Chemical Communications (1981), (24), 1254-5 CODEN: JCCCAT; ISSN: 0022-4936
DOCUMENT TYPE:	Journal
LANGUAGE:	English
GI	



AB The structures of the benzofurans I (R = CHO, CH2OH), isolated from D. baroni, were detd. by independent prepn. and NMR study of their acetyl derivs. The binary neoflavonoid, dalcriodain (II; R = H), was isolated from D. latifolia and its structure detd. from spectral data of its monoacetate II (R = Ac).

IT **81474-70-6P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 81474-70-6 HCAPLUS
CN 5-Benzofuranol, 6-methoxy-2-methyl-3-phenyl-, acetate (9CI) (CA INDEX NAME)



L17 ANSWER 17 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1981:16620 HCAPLUS
DOCUMENT NUMBER: 94:16620
TITLE: Benzofuran-2-one or indolin-2-one compounds as stabilizers of polymers
INVENTOR(S): Mayerhoefer, Horst; Schneider, Hermann; Hinsken, Hans; Mueller, Wolfgang
PATENT ASSIGNEE(S): Sandoz A.-G., Switz.
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8001566	A1	19800807	WO 1980-CH17	19800205
W: AT, BR, CH, DE, JP, NL, NO, SE				
BE 881495	A1	19800801	BE 1980-9708	19800201
BE 881496	A1	19800801	BE 1980-9709	19800201
GB 2042562	A	19800924	GB 1980-3483	19800201
GB 2042562	B2	19830511		
GB 2044272	A	19801015	GB 1980-3482	19800201
GB 2044272	B2	19830316		
US 4325863	A	19820420	US 1980-118054	19800204
US 4338244	A	19820706	US 1980-118011	19800204
CA 1134094	A1	19821019	CA 1980-345017	19800204
CA 1150257	A1	19830719	CA 1980-345018	19800204
FR 2449106	A1	19800912	FR 1980-2418	19800205
FR 2449106	B1	19860905		
NL 8020018	A	19801128	NL 1980-20018	19800205
ES 488290	A1	19801216	ES 1980-488290	19800205
JP 55501181	T2	19801225	JP 1980-500338	19800205
JP 63026771	B4	19880531		
FR 2464278	A1	19810306	FR 1980-2417	19800205
FR 2464278	B1	19831118		
CH 645908	A	19841031	CH 1980-7495	19800205
CH 647773	A	19850215	CH 1983-5598	19800205
DE 3030673	C1	19920806	DE 1980-3030673	19800205
AT 8009007	A	19870115	AT 1980-9007	19800807
AT 383816	B	19870825		
FR 2460943	A1	19810130	FR 1980-20309	19800922
FR 2460943	B1	19831125		

SE 8006932	A	19801003	SE 1980-6932	19801003
SE 443570	B	19860303		
SE 443570	C	19860612		
NO 8002930	A	19801003	NO 1980-2930	19801003
BR 8006453	A	19801230	BR 1980-6453	19801003
FR 2464261	A1	19810306	FR 1980-21217	19801003
FR 2464261	B1	19840210		
US 4611016	A	19860909	US 1981-335066	19811228

PRIORITY APPLN. INFO.:

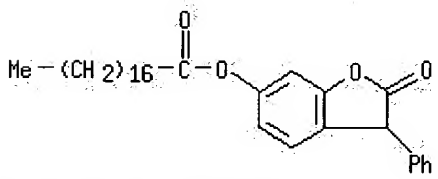
CH 1979-1104	19790205
CH 1979-8793	19790928
US 1980-118054	19800204
CH 1980-7495	19800205
WO 1980-CH17	19800205

AB Substituted benzofuran-2-ones (I) and/or indolin-2-ones (II) and their bis derivs., useful as stabilizers for polymers, are prepd. and contain, in the 3 position, ≥1 H atom or an org. moiety bound by a double bond to the ring. I which are unsubstituted in the 3-position contain no tert-butyl-hindered OH in the 5-position. II have no acetamido substituents in position 3. The 3-acylbenzofuran-2-ones are not used with halogenated polymers. Thus, heating 15.2 g mandelic acid [90-64-2] at 20.6 g 2,4-di-tert-butylphenol [96-76-4] under N at 185° for 20 h gave 5,7-di-tert-butyl-3-phenyl-2(3H)-benzofuran-1-one (III) [66737-86-8]. A compn. contg. PVC [9002-86-2] 100, octyl stearate 1, Ba-Cd stabilizer 1.5, III 1, and aryl alkyl phosphates 0.5 was homogenized in a fluid mixer to 110°, roll milled at 180°, and pressed at 20 atm to 1-mm thick test panels, which were heated 30 min at 180° in a recirculating drying oven without causing discoloration. A control without III was strongly discolored by heating under these conditions.

IT **75846-41-2**
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(stabilizers, for polymers)

RN 75846-41-2 HCAPLUS

CN Octadecanoic acid, 2,3-dihydro-2-oxo-3-phenyl-6-benzofuranyl ester (9CI) (CA INDEX NAME)

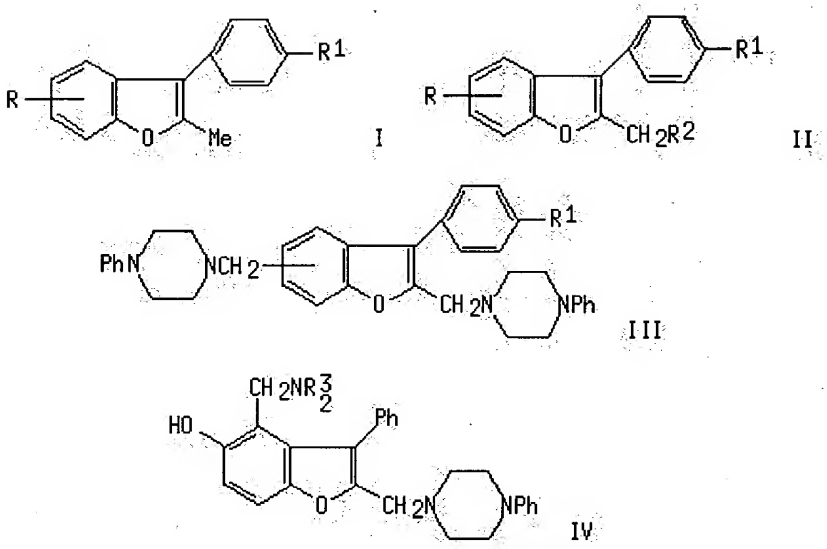


L17 ANSWER 18 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER:	1980:471427 HCAPLUS
DOCUMENT NUMBER:	93:71427
TITLE:	Synthesis and pharmacological properties of 2-aminomethyl, 2,4-, 2,5- and 2,6-diaminomethyl derivatives of 3-arylbenzofuran
AUTHOR(S):	Grinev, A. N.; Zotova, S. A.; Mikhailova, I. N.; Stolyarchuk, A. A.; Stepanyuk, G. I.; Matsak, V. V.
CORPORATE SOURCE:	Vses. Nauchno-Issled. Khim. Farm. Inst., Moscow, USSR
SOURCE:	Khimiko-Farmatsevticheskii Zhurnal (1980), 14(3), 43-9 CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE:	Journal
LANGUAGE:	Russian
OTHER SOURCE(S):	CASREACT 93:71427

GI

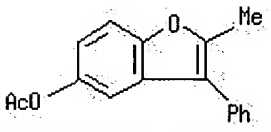


AB Benzofurans I (R = 5-Cl, 5-Me, 6-Me; R1 = Cl, H, MeO), prepd. from the corresponding α-phenoxyproprophenones by cyclization with polyphosphoric acid, were brominated with N-bromosuccinimide followed by reaction with amines to give 16-94.8% II (R2 = Et2N, 4-phenyl-1-piperazinyl, morpholino, piperidino). III (R1 = Cl, MeO; 5- or 6-attachments) and IV [NR32 = Me2N (V), 4-phenyl-1-piperazinyl, piperidino (VI)] were also prepd. VI were local anesthetics; IV (R32N = 4-phenyl-1-piperazinyl) did not have local anesthetic activity. V, VI and III (6-attachment; R1 = p-Cl) had weak antiarrhythmic effect. At 10-6-10-5 g/mL the compds. lowered the muscle tone of the small intestines; min concns. of V and VI were 10-6 and 2 × 10-5 g/mL, resp.

IT **72108-93-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(prepn. and pharmacol. activity of)

RN 72108-93-1 HCAPLUS

CN 5-Benzofuranol, 2-methyl-3-phenyl-, acetate (9CI) (CA INDEX NAME)

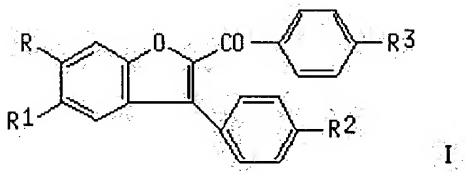


L17 ANSWER 19 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1980:426183 HCAPLUS
DOCUMENT NUMBER: 93:26183
TITLE: Studies in potential antifertility agents: Part I. Synthesis of basic ethers from phenolic 2-aroyl-3-phenylbenzofurans
AUTHOR(S): Mahesh, V. K.; Sharma, Rakesh

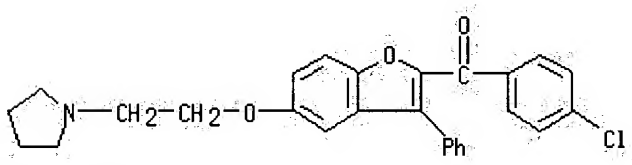
CORPORATE SOURCE: Chem. Dep., Univ. Roorkee, Roorkee, 247672, India
SOURCE: Indian Journal of Chemistry, Section B: Organic Chemistry Including Medicinal Chemistry (1979), 17B(4), 382-4
CODEN: IJSBDB; ISSN: 0376-4699
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 93:26183
GI



I

AB Benzofurans I [R = H, Me; R1 = H, Me, Cl, OMe, 2-pyrrolinoethoxy (Q), OCH2(CH2)nNMe2 (Z), n = 1,2; R2 = Q, Z (n = 1,2)], H, Me, MeO, HO; R3 = H, MeO, HO, Q, Z (n = 1,2), Cl, Br] were prepd. by condensing 2-hydroxybenzophenones with phenacyl bromides in the presence of K2CO3. Treatment of Me ethers of I with either pyridine-HCl or AlCl3 in C6H6 resulted in demethylation. The resulting phenols were then alkylated with aminoalkyl halides in acetone-K2CO3 to yield aminoalkoxy derivs. The biol. properties of I will be reported later.

IT **74013-54-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 74013-54-0 HCAPLUS
CN Methanone, (4-chlorophenyl)[3-phenyl-5-[2-(1-pyrrolidinyl)ethoxy]-2-benzofuranyl]- (9CI) (CA INDEX NAME)

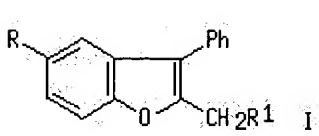


L17 ANSWER 20 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

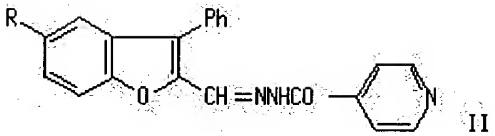
Full Text | Citing References

ACCESSION NUMBER: 1980:6335 HCAPLUS
DOCUMENT NUMBER: 92:6335
TITLE: Synthesis and biological activity of 3-arylbenzofuran derivatives
AUTHOR(S): Grinev, A. N.; Zotova, S. A.; Mikhailova, I. N.; Stolyarchuk, A. A.; Stepanyuk, G. I.; Matsak, V. V.; Sizova, T. N.; Pershin, G. N.
CORPORATE SOURCE: Vses. Nauchno-Issled. Khim.-Farm. Inst., Moscow, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1979), 13(8), 39-45
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 92:6335

GI



I



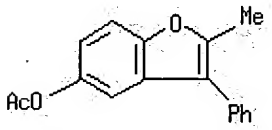
II

AB About 30 title compds. were prepd. by std. reactions. E.g., treating I (R = Cl, Br; R1 = OH) with PhNCO gave I (R1 = O2CNHPh) in 82.3 and 69% yield, resp. II (R = Cl, Br) were obtained in 54 and 69% yield, resp., by treatment of the aldehyde with isonicotinic acid hydrazide. Treatment of I (R = Cl, Br; R1 = Br) with isothiocyanate gave I (R1 = CNS) in 20 and 60% yield, resp. I (R = Cl, Br; R1 = O2CNHPh) and II (R = Cl) delayed the onset of arrhythmia. I (R = Cl, Br, R1 = CNS; R = R1 = Cl), and 5-bromo-3-phenyl-2-benzofurancarboxaldehyde were active antimicrobial compds. I (R = Cl, Br; R4 = CNS) were active fungicides.

IT 72108-93-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(bromination of)

RN 72108-93-1 HCAPLUS

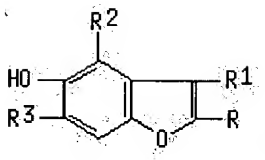
CN 5-Benzofuranol, 2-methyl-3-phenyl-, acetate (9CI) (CA INDEX NAME)



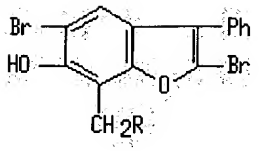
L17 ANSWER 21 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

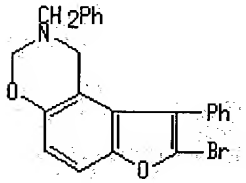
ACCESSION NUMBER: 1979:439221 HCAPLUS
DOCUMENT NUMBER: 91:39221
TITLE: Synthesis and study of the pharmacological activity of aminomethyl derivatives of halobenzofurans
AUTHOR(S): Grinev, A. N.; Zotova, S. A.; Mikhailova, I. N.; Stolyarchuk, A. A.; Gaevoi, V. P.; Matsak, V. V.
CORPORATE SOURCE: Vses. Nauchno-Issled. Khim.-Farm. Inst., Moscow, USSR
SOURCE: Khimiko-Farmatsevticheskii Zhurnal (1978), 12(12), 25-30
CODEN: KHFZAN; ISSN: 0023-1134
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 91:39221
GI



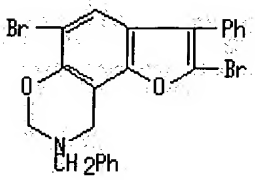
I



II



III



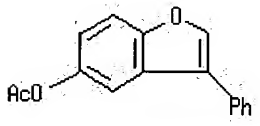
IV

AB Fifteen benzofurans I (R = Cl, Ph, Br; R1 = Ph, Cl, H; R2 = CH2NMe2, Br, CH2NHCH2Ph, CH2NEt2, piperidinomethyl, morpholinomethyl, 4-phenyl-1-piperazinylmethyl; R3 = H, CH2NMe2, CH2NEt2, piperidinomethyl morpholinomethyl, 4-phenyl-1-piperazinylmethyl), II (R = NMe2, NHCH2Ph), III and IV and some of their HCl salts were prepd., e.g., by aminomethylation of the resp. hydroxybenzofuran. LD50 of the prepd. compds. in mice was 245-1415 mg/kg. I (R = Ph, R1 = Cl, R2 = CH2NEt2, R3 = H; R = Ph, R1 = H, R2 = Br, R3 = CH2NMe2, CH2NEt2, piperidinomethyl, 4-phenyl-1-piperazinylmethyl) and II (R = NMe2) had antiarrhythmic activity comparable to novocainamide and quindine. Some of the prepd. compds. also had spasmolytic activity but none of the prepd. compds. were useful as local anesthetics.

IT **59288-02-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(chlorination of)

RN 59288-02-7 HCAPLUS

CN 5-Benzofuranol, 3-phenyl-, acetate (9CI) (CA INDEX NAME)



L17 ANSWER 22 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

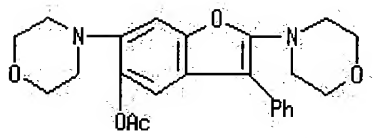
Full Text | Citing References

ACCESSION NUMBER: 1978:135864 HCAPLUS
DOCUMENT NUMBER: 88:135864
TITLE: Quinones and quinone methides. III. A novel side-chain amination reaction of 2-(1-phenylethyl)-1,4-benzoquinones
AUTHOR(S): Jurd, Leonard
CORPORATE SOURCE: WRRC, ARS, Berkeley, CA, USA
SOURCE: Australian Journal of Chemistry (1978), 31(2), 347-52
CODEN: AJCHAS; ISSN: 0004-9425
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 88:135864

AB 2-Benzyl-5-methoxy-1,4-benzoquinones react with morpholine to yield 2-phenylmorpholinomethylhydroquinones. However, 5-methoxy-2-(1-phenylethyl)-1,4-benzoquinones undergo a novel amination reaction at the β-C atom of the alkyl group with the formation of 2-morpholino-3-phenylbenzofurans.

IT **66092-39-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)

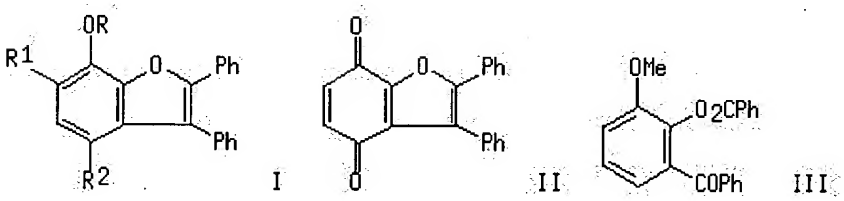
(prepn. of)
RN 66092-39-5 HCAPLUS
CN 5-Benzofuranol, 2,6-di-4-morpholinyl-3-phenyl-, acetate (ester) (9CI) (CA INDEX NAME)



L17 ANSWER 23 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

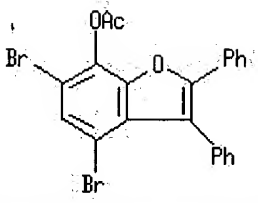
Full Text | Citing References

ACCESSION NUMBER: 1978:37531 HCAPLUS
DOCUMENT NUMBER: 88:37531
TITLE: Reactions of benzofuran. Oxidation, nitration and bromination of 7-hydroxy- and 7-methoxybenzofuran derivatives
AUTHOR(S): Abd el Rahman, A. H.; Basha, R. M.
CORPORATE SOURCE: Fac. Sci., Mansoura Univ., Mansoura, Egypt
SOURCE: Zeitschrift fuer Naturforschung, Teil B: Anorganische Chemie, Organische Chemie (1977), 32B(9), 1084-8
CODEN: ZNBAD2; ISSN: 0340-5087
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 88:37531
GI



AB Condensation of benzoin and pyrocatchol gave 7-hydroxy-2,3-diphenylbenzofuran I (R = R1 = R2 = H), which on oxidn. yielded the quinone II whereas, its Me ether I (R = Me, R1 = R2 = H) gave the corresponding benzophenone III. Nitration of I (R = H, Me; R1 = R2 = H) gave I (R = H, R1 = R2 = NO2; R = Me, R1 = H, R2 = NO2). Bromination of 1 (R = H, Me; R1 =R2 = H) gave I (R = H, R1 = R2 = Br; R = Me, R1 = Br, R2 = H).

IT **65202-40-6P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and oxidn. of)
RN 65202-40-6 HCAPLUS
CN 7-Benzofuranol, 4,6-dibromo-2,3-diphenyl-, acetate (9CI) (CA INDEX NAME)



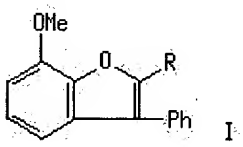
L17 ANSWER 24 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1977:484802 HCAPLUS
DOCUMENT NUMBER: 87:84802
TITLE: 2-Nitro-3-phenyl-6 (and 7)-alkoxybenzofurans
INVENTOR(S): Scherrer, Robert A.
PATENT ASSIGNEE(S): Riker Laboratories, Inc., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4022908	A	19770510	US 1975-628329	19751103
US 3927037	A	19751216	US 1974-446006	19740226

PRIORITY APPLN. INFO.: US 1974-446006 19740226
GI

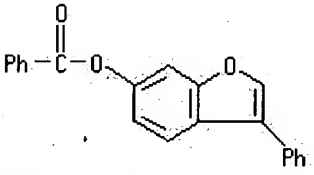


I

AB The title compds. were prepd. Thus, 2-MeOC6H4OH with BrCH2COPh gave 2-MeOC6H4OCH2COPh which was cyclized to I (R = H); nitration of I (R = H) gave I (R = NO2).

IT **58468-45-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and bromination of)

RN 58468-45-4 HCAPLUS
CN 6-Benzofuranol, 3-phenyl-, benzoate (9CI) (CA INDEX NAME)

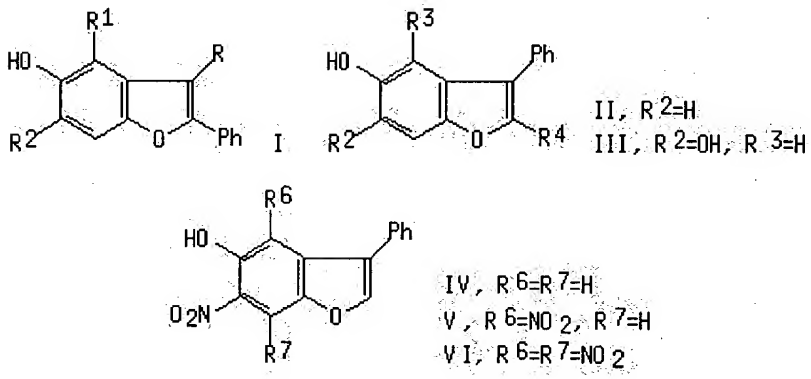


L17 ANSWER 25 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

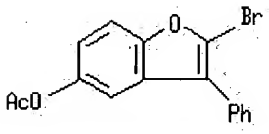
ACCESSION NUMBER: 1976:179951 HCAPLUS
DOCUMENT NUMBER: 84:179951

TITLE: Bromination and nitration of 2(3)-phenyl-5(6)-hydroxybenzofurans
AUTHOR(S): Grinev, A. N.; Zotova, S. A.; Vlasova, T. F.
CORPORATE SOURCE: Vses. Nauchno-Issled. Khim.-Farm. Inst. im. Ordzhonikidze, Moscow, USSR
SOURCE: Khimiya Geterotsiklicheskikh Soedinenii (1976), (3), 311-15
CODEN: KGSSAQ; ISSN: 0132-6244
DOCUMENT TYPE: Journal
LANGUAGE: Russian
OTHER SOURCE(S): CASREACT 84:179951
GI



AB Bromobenzofuranols (I, R = R2 = H, R1 = Br; R = R1 = R2 = Br), II (R3 = R4 = Br), and III (R4 = R5 = Br) were obtained in 45-83% yields by bromination of the corresponding benzofuranols (I, II, III, R, R1-5 = H) with Br-AcOH 2 hr at 20°. Nitrobenzofuranols (I, R = R2 = H, R1 = NO2; R = R1 = R2 = NO2), IV, V, and VI were obtained in 33.4-65% yields by nitration of the corresponding benzofuranols with HNO3-AcOH 1 hr at 15°. Bromination and nitration of benzofuranol acetates resulted in substitution in the furan ring.

IT **59288-05-0P**
RL: FORM (Formation, nonpreparative); PREP (Preparation)
(formation of, in bromination of phenylbenzofuranol acetates)
RN 59288-05-0 HCAPLUS
CN 5-Benzofuranol, 2-bromo-3-phenyl-, acetate (9CI) (CA INDEX NAME)



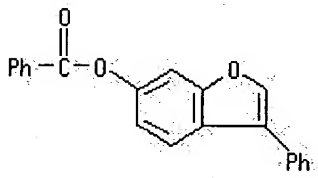
L17 ANSWER 26 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN
Full Text | Citing References

ACCESSION NUMBER: 1976:105382 HCAPLUS
DOCUMENT NUMBER: 84:105382
TITLE: Alkoxy-substituted-2-nitro-3-phenylbenzofurans
INVENTOR(S): Scherrer, Robert A.
PATENT ASSIGNEE(S): Riker Laboratories, Inc., USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM

DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3927037	A	19751216	US 1974-446006	19740226
US 4022908	A	19770510	US 1975-628329	19751103

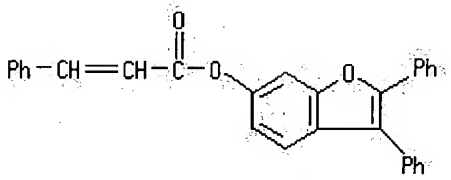
PRIORITY APPLN. INFO.: US 1974-446006 19740226
GI For diagram(s), see printed CA Issue.
AB Benzofurans I (R1 = Me, Et, position 6; R1 = Me, position 7), useful as antimicrobial agents, were prepd., e.g., from 2,4-HO(MeO)C6H3Bz via 2,5-Bz(MeO)C6H3OCH2CO2Et, carboxylate II (R = CO2Et, R1 = Me, position 6), the free acid II (R = CO2H), benzofuran II (R = H), hydroxy compd. II (R = H, R1 = H, position 6), benzoate II (R1 = Bz), bromo compd. II (R = Br, R1 = Bz, position 6), nitro compd. II (R = NO2 (with N2O4), hydroxy compd. II (R1 = H), and ethylation to I (R1 = Et, position 6). Bromination of II (R = H, R1 = Me, position 6) and nitration of the product gave I (R1 = Me, position 6). Unbrominated II (R = H, R1 = Me, position 7) was nitrated to give I. Also prepd. was I (R1 = hexyl, position 6). I gave complete inhibition of Bacillus subtilis, with serum, at 1 μg/ml; Streptococcus sp. required 10 μg/ml.
IT **58468-45-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and bromination of)
RN 58468-45-4 HCAPLUS
CN 6-Benzofuranol, 3-phenyl-, benzoate (9CI) (CA INDEX NAME)



L17 ANSWER 27 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN
Full Text | Citing References

ACCESSION NUMBER: 1975:514258 HCAPLUS
DOCUMENT NUMBER: 83:114258
TITLE: Synthesis of substituted linear furo[3,2-g][1]benzopyrones
AUTHOR(S): Hishmat, O. H.; Soliman, F. M.; Khalil, Kh. M. A.
CORPORATE SOURCE: Natl. Res. Cent., Cairo, Egypt
SOURCE: Indian Journal of Chemistry (1975), 13(5), 479-81
CODEN: IJOCAP; ISSN: 0019-5103
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Furobenzopyranone I was prepd. by Claisen condensation of EtOAc with 6-hydroxy-2,3-diphenyl-5-benzofuranyl Me ketone II and cyclization of the product benzofuranylbutanedione III in dil. H2SO4. The 7-H analog IV of I was prepd. by oxidative cyclization of propenone V in isoamyl alc. in the presence of SeO2. Furobenzopyran VI was prepd. by reaction of (EtO)2CO with II in the presence of Na.
IT **56857-18-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)

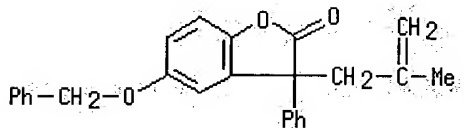
(prepn. of)
RN 56857-18-2 HCAPLUS
CN 2-Propenoic acid, 3-phenyl-, 2,3-diphenyl-6-benzofuranyl ester (9CI) (CA INDEX NAME)



L17 ANSWER 28 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1975:57517 HCAPLUS
DOCUMENT NUMBER: 82:57517
TITLE: Substituted chromans and tetrahydrofuro[2,3-b]benzofurans (trapped tetrahedral intermediates) from 3-phenyl-2-benzofuranones
AUTHOR(S): Zaugg, H. E.; Leonard, J. E.; DeNet, R. W.; Arendsen, D. L.
CORPORATE SOURCE: Res. Div., Abbott Lab., North Chicago, IL, USA
SOURCE: Journal of Heterocyclic Chemistry (1974), 11(5), 797-802
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 82:57517
GI For diagram(s), see printed CA Issue.
AB The neighboring group reaction has been extended to the synthesis of chromans I (R = CO2H, ester, amide, aminomethyl; R1 = H, Cl, OH, OMe) with geminal Me in the 2-position, a feature common to certain physiol. active natural chromans. Cyclic ortho ester by-products II (R1 = Cl, OMe), not obsd. previously were formed as a result of the intramol. trapping of tetrahedral intermediates. Reasons for this unexpected side reaction are discussed.
IT **54613-02-4P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 54613-02-4 HCAPLUS
CN 2(3H)-Benzofuranone, 3-(2-methyl-2-propenyl)-3-phenyl-5-(phenylmethoxy)- (9CI) (CA INDEX NAME)

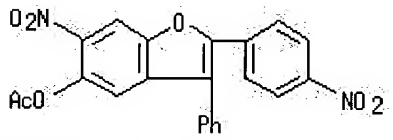


L17 ANSWER 29 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

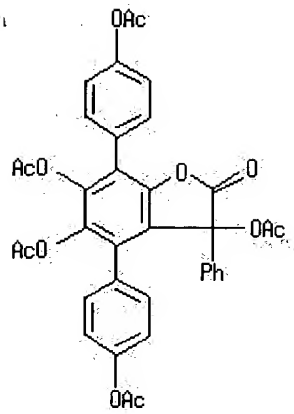
Full Text | Citing References

ACCESSION NUMBER: 1973:147709 HCAPLUS
DOCUMENT NUMBER: 78:147709
TITLE: Reactions of substituted hydroxybenzofurans. II
AUTHOR(S): Hishmat, Orchidee H.; Abd el Rahman, A. H.
CORPORATE SOURCE: Natl. Res. Cent., Cairo, Egypt

SOURCE: Journal fuer Praktische Chemie (Leipzig) (1973), 315(2), 227-34
CODEN: JPCEAO; ISSN: 0021-8383
DOCUMENT TYPE: Journal
LANGUAGE: English
GI For diagram(s), see printed CA Issue.
AB Bromination of the benzofuran I (Rn = H) and II (Rn = H) with Br in CCL4 gave I (Rn = 5-Br) and II (Rn = 4,6-Br2), resp. Nitration of I, II, and III (Rn = H) gave I (Rn = 5-NO2), II (Rn = 6-NO2), or the dinitro deriv. IV (R3 = R4 = H), resp. Bromination of II (Rn = 6-NO2) gave V (R3 = Br, R4 = Me). The structures were confirmed by oxidn., followed by hydrolysis to give the benzophenone derivs. Redn. of the nitro derivs. gave the corresponding amines.
IT **41186-96-3**
RL: RCT (Reactant); RACT (Reactant or reagent)
(ring fission by oxidn. of)
RN 41186-96-3 HCAPLUS
CN 5-Benzofuranol, 6-nitro-2-(4-nitrophenyl)-3-phenyl-, acetate (9CI) (CA INDEX NAME)



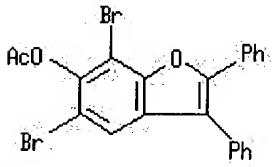
L17 ANSWER 30 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN
Full Text | Citing References
ACCESSION NUMBER: 1971:111829 HCAPLUS
DOCUMENT NUMBER: 74:111829
TITLE: Fungus pigments. XX. Structure of peniophorin, one of the pigments produced by Peniophora sanguinea
AUTHOR(S): Gripenberg, Jarl; Martikkala, Jaakko
CORPORATE SOURCE: Dep. Chem., Helsinki Univ. Technol., Otaniemi, Finland
SOURCE: Acta Chemica Scandinavica (1947-1973) (1970), 24(10), 3444-8
CODEN: ACSAA4; ISSN: 0001-5393
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The structure of peniophorin, an analog of xylerythrin (produced by the same fungus), was detd. as either 5-hydroxy-3,4-bis(p-hydroxyphenyl)-7-phenylbenzofuran-2,6-dione or 5-hydroxy-3,7-bis(p-hydroxyphenyl)-4-phenylbenzofuran-2,6-dione.
IT **31590-05-3P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 31590-05-3 HCAPLUS
CN 2(3H)-Benzofuranone, 3,5,6-trihydroxy-4,7-bis(p-hydroxyphenyl)-3-phenyl-, pentaacetate (8CI) (CA INDEX NAME)



L17 ANSWER 31 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1970:414587 HCAPLUS
DOCUMENT NUMBER: 73:14587
TITLE: Reactions with substituted hydroxybenzofurans
AUTHOR(S): Hishmat, Orchidee H.; Abdel Rahman, Abdel Rahman H.
CORPORATE SOURCE: Nat. Res. Centre, Cairo, Egypt
SOURCE: Justus Liebigs Annalen der Chemie (1970), 733, 120-4
CODEN: JLACBF; ISSN: 0075-4617
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB Bromination with Br in CCl4 or nitration with HNO3 in HOAc of 5,7-bis(R-substituted)-6-hydroxy-2,3-diphenylbenzofurans (I, R = H) (Ia) gave 83% I (R = Br) (Ib) or 89% I (R = NO2) (Ic), resp. Ib or Ic yielded on acetylation followed by CrO3 oxidn. 78% 2,4,6,3-R2Bz(AcO)C6HOBz (II, R = Br) or 74% II (R = NO2). II were refluxed with KOH-EtOH to give 73-76% 3,5,2,4-R2(HO)2C6HBz (where R = Br or NO2). Similarly, 4,6-bis(R-substituted)-5-hydroxy-2,3-diphenylbenzofuran (III) (R = H) (IIIa) was brominated to give 79% III (R = Br) (IIIb). Oxidn. of IIIb with CrO3 yielded 57% 3,5,2,4-Br2Bz(AcO)C6HOBz, which was hydrolyzed to give 72% 2,4,3,6-Br2(HO)2C6HBz. Treatment of Ia or IIIa with R1N2+Cl- (R1 = Ph, p-MeC6H4, or m-O2NC6H4) gave 7-89% of the corresponding 5(or 7)-(R1N:N-substituted)-6-hydroxybenzofurans or 4(or 6)-(R1N:N-substituted)-5-hydroxybenzofurans, resp.
IT **27065-42-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)
RN 27065-42-5 HCAPLUS
CN 6-Benzofuranol, 5,7-dibromo-2,3-diphenyl-, acetate (8CI) (CA INDEX NAME)



L17 ANSWER 32 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

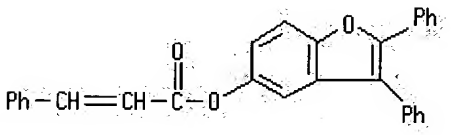
ACCESSION NUMBER: 1965:90854 HCAPLUS
DOCUMENT NUMBER: 62:90854

ORIGINAL REFERENCE NO.: 62:16218g-h,16219a-h,16220a-c
TITLE: Synthesis of substituted linear furano[2,3-g][1]benzopyrones and [3,2-b]thianaphthenopyrones
AUTHOR(S): Mustafa, A.; Asker, W.; Hishmat, O. H.; Ali, M. I.; Mansour, A. K. E.; Abed, N. M.; Khalil, K. M. A.; Samy, S. M.
CORPORATE SOURCE: Cairo Univ.
SOURCE: Tetrahedron (1965), 21(4), 849-59
CODEN: TETRAB; ISSN: 0040-4020
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 62:90854
GI For diagram(s), see printed CA Issue.
AB Dry PhNO2 (10 ml.) and 0.6 g. acetoxy-2,3-diphenylbenzofuran (I, R = Ac, R1 = H) kept 5 days at 25° with 1 g. anhyd. AlCl3 and the dried product extd. with ligroine (b. 100-40°) gave 73% I (R = H, R1 = Ac) (II), m. 157° (alc.). I (R = R1 = H) (III) (2.8 g.) and 3.5 g. AlCl3 in 25 ml. PhNO2 kept 5 days at 25° with 8 ml. AcCl, extd. with ligroine and the cryst. product recrystd. from C6H6 yielded 12% 4-acetyl-5-hydroxy-2,3-diphenylbenzofuran, m. 291°. Concn. of the ligroine mother liquor gave 65% II. III (2.8 g.), and 1.86 g. PhCH:CHCOCl refluxed 3 hrs. with 3.4 g. AlCl3 in 25 ml. CS2 and the product extd. with petr. ether (b. 40-60°) yielded 95% I (R = PhCH:CHCO, R1 = H), m. 132° (alc.), converted by keeping in PhNO2 with AlCl3 to I (R = H, R1 = PhCH:CHCO), m. 184°, giving a reddish brown color with aq. FeCl3. Treatment of III with PhCH:CHCOCl under Friedel-Crafts conditions gave 85% yield. II (1 g.) in 20 ml. EtOAc refluxed 1 hr. with 1 g. finally divided Na and the mixt. decompd. with ice-H2O, washed with Et2O and the aq. layer acidified with dil. HCl yielded 82% I (R = H, R1 = AcCH2CO) (IV). II(1 g.) and 4 ml. Et2CO3 shaken 5 min. with 0.5 g. Na at 25° and the mixt. kept at 100° 4 hrs., the product taken up in H2O and the soln. washed with Et2O, the aq. layer acidified with cold dil. HCl gave 0.7 g. 2,3-diphenyl-8-hydroxy-6H-furano[2,3-g][1]benzopyran-6-one (V), m. 288-90° (decompn.), N.M.R. singlets at 7.92, 7.18 ppm. and a signal group at 7.4 ppm. IV (1 g.) refluxed 1 hr. in 30 ml. 25% aq. H2SO4 and the soln. neutralized with Na2CO3 yielded 77% 2,3-diphenyl-6-methyl-8H-furano[2,3-g][1]benzopyran-8-one (VI), m. 211-12°, N.M.R. signals at 8.24, 7.4, 6.14, 2.35 ppm. The substitution of the 2- and 3-Ph groups effected the stabilization of V and VI against the action of mineral acids. III refluxed with H2C:CHCH2Br and K2CO3 in dry Me2CO 12 hrs. yielded 55% I (R = CH2:CHCH2, R1 = H), m. 72°, rearranged by refluxing 3 hrs. in PhNMe2 and acidifying the product to give I (R = H, R1 = CH2:CHCH2), m. 83°, giving a red color with concd. H2SO4. The thianaphthene (VII, R = H, R1 = OH) (VIII) (1 g.) (Smiles and Hart, CA 18, 390) heated with 1 ml. PhNH2 in 20 ml. alc. or in the absence of alc. 4 hrs. on a water bath yielded 85% α-(3-hydroxy-2-thianaphthenoyl)acetanilide (IX, R = Ph) (X), m. 188-90° (alc.). Similarly VIII and p-MeC6H4NH2 heated in alc. gave 60% IX (R = p-MeC6H4), m. 199° (alc.). X (0.6 g.) and 1 ml. PhNH2 heated 1.5 hrs. at 180° and the product triturated with cold alc. gave VII (R = H, R1 = NHPh) (XI), m. 280°. Concn. of the mother liquor gave a compd. tentatively formulated as IX [R = C(NHPh):CHCONHPh], m. 222°, giving a green color with aq. FeCl3. VIII heated 1.5 hrs. with p-MeC6H4NH2 gave 71% VII (R = H, R1 = p-MeC6H4NH), m. 269-70° (alc.). VIII benzoylated and crystd. from alc. yielded 75% VII (R = H, R1 = OBz), m. 162°, converted by refluxing with PhNH2 in alc. to X. VII (R = H, R1 = Cl) refluxed in alc. with PhNH2 yielded XI. VIII (0.01 mole), 8 ml. RCO2H, and 10 ml. POCl3 refluxed 45 min. and the mixt. poured onto ice, the ppt. washed with cold H2O and dried gave the acyl derivs. VII [R, R1, m.p. (solvent), and % yield given]: Ac, OH (XII),

189-90° (AcOH), 76; EtCO, OH (XIII), 180-1° (AcOH), 65; PrCO, OH (XIV), 170-1° (AcOH), 76; Me2CHCO, OH, 172-3° (AcOH), 70; PhCH2CO, OH, 205° (dioxane), 71. The acyl derivs. XII-XIV (0.5 g.) refluxed 3-4 hrs. with excess of the appropriate amine (8 hrs. with NH4OAc) in 30 ml. alc. gave the corresponding amino or imino derivs. (XV) as listed [R, R1, m.p. (solvent), and % yield given]: Me, H, 288-90° (xylene), 80: Me, Et, 224° (alc.), 73; Me, Bu, 128-9° (aq. alc.), 90; Me, EtMeCH, 139-40° (aq. alc.), 83; Me, Me2CHCH2, 109-10° (aq. alc.), 90; Me, p-MeC6H4, 228-30° (AcOH) 82; Et, Ph, 200° (alc.), 80; Pr, Ph, 145° (alc.), 72. XII and MePhNNH2 refluxed in alc. 3 hrs. and the product recrystd. yielded 82% XV (R = Me, R1 = NMePh), m. 168°. XII heated with BzH in the presence of a drop of piperidine 1 hr. on a water bath yielded 65% VII (R = COCH:CHR2, R1 = OH) (XVI, R2 = Ph), m. 230° (dioxane-H2O). Similarly was obtained 60% XVI (R2 = p-MeOC6H4), m. 220° (dioxane). The ir spectrum of XII showed a broad OH absorption band as well as a strong peak in good agreement with the spectra of α,β-unsatd. δ-lactones. VIII gave bands at 7.55 and 5.87 μ but displayed no free OH peak, indicating a strongly H-bonded OH group. VIII kept 16 hrs. at 25° in AcOH with concd. HNO3 gave VII (R = NO2, R1 = OH), m. 215° (AcOH), reduced with Zn dust in 1:1 AcOH-Ac2O to give VII (R = NHAc, R1 = OH), m. 250-2°. VIII (1 g.) in 100 ml. alc. contg. 2.5 g. NaOAc.3H2O treated with 0.005 mole of the appropriate aryl diazonium chloride gave 94% VII (R = PhN:N, R1 = OH), m. 260°, converted by reductive acetylation to yield 70% VII (R = NHAc, R1 = OH), m. 250-2°; 84% VII (R = p-MeC6H4N:N, R1 = OH), m. 250° (AcOH); and 85% VII (R = p-ClC6H4N:N, R1 = OH), m. 257° (AcOH). EtOH (10 ml.) contg. 0.001 mole 2-acetyl-3-hydroxythianaphthene, treated with 0.0015 mole of the appropriate aldehyde, RCHO, and the mixt. refluxed 30 min. with 4 ml. 10% alc. NaOH, kept at 25°, and acidified with dil. HCl, filtered and the dried products crystd. from AcOH gave the 2-cinnamoyl-3-hydroxythianaphthenes (XVII) (R, m.p., and % yield): Ph, 154°, 50; p-MeOC6H4 (XVIII), 175°, 60; p-MeC6H4 (XIX), 130°, 65; 3,4-(OCH2O)C6H3(XX), 199°, 75; 3,4-(EtO)2C6H3 (XXI), 150°, 50; p-ClC6H4 (XXII), 166°, 70. Each of the chalcones XX-XXII (0.5 g.) refluxed 10-15 hrs. with 0.5 g. SeO2 in 8 ml. isoamyl alc. and the filtered soln. evapd., the residue washed with cold alc. and crystd. from alc. gave the 2-aryl-4-oxo-4H-pyrano[3,2-b]thianaphthenes (XXIII) (R, m.p., and % yield given): 3,4-(OCH2O)C6H3, 266-7°, 80; 3,4-(EtO)2C6H3, 170-1°, 65; p-ClC6H4, 235°, 80. Each of the chalcones XVIII-XXI (0.5 g.) and 0.5 g. of the appropriate thiol heated 4 hrs. on a water bath with 1-2 drops of piperidine, the product triturated with petr. ether and the solid crystd. gave the thiol adducts (XXIV) [R, R1, m.p. (solvent) and % yield given]: p-MeOC6H4, p-MeC6H4 (XXV), 101-2° (alc.), 60; p-MeC6H4, Ph (XXVI), 110-12° (AcOH), 55; p-MeC6H4, m-MeC6H4, 92-3° (alc.), 60; p-MeC6H4, p-MeC6H4, 105-6° (alc.), 60; 3,4-(OC-H2O)C6H3, Ph, 125-6° (AcOH), 58; 3,4-(OCH2O)C6H3, o-MeC6H4, 132-3° (AcOH), 60; 3,4-(OCH2O)C6H3, m-MeC6H4, 106° (AcOH), 60; 3,4-(OCH2O)C6H3, p-MeC6H4, 135-6° (AcOH), 60; 3,4-(EtO)2C6H3, p-MeC6H4, 105° (alc.), 50. XXVI (0.5 g.) in 10 ml. alc. refluxed 30 min. with 3 ml. 5% alc. KOH and the product taken up in 10 ml. cold alc., acidified with cold dil. HCl and the product crystd. from AcOH gave XIX. Treatment of XVIII or XX in AcOH with 30% H2O2 gave the dioxides [XXVII, R = p-MeOC6H4, 3,4-(OCH2O)C6H3] (XXVIII, XXIX), m. 215° (AcOH), 271-3° (PHCl), in 61 and 70% yields, resp. XXIX was also obtained in 52% yield by treatment of the thiol adduct XXIV [R = 3,4-(OCH2O)C6H3, R1 = p-MeC6H4] with H2O2 in AcOH. XXVIII and XXIX formed unstable thiol adducts with p-thiocresol.

IT **2035-12-3**, Cinnamic acid, 2,3-diphenyl-5-benzofuranyl ester

(prepn. of)
RN 2035-12-3 HCAPLUS
CN Cinnamic acid, 2,3-diphenyl-5-benzofuranyl ester (7CI, 8CI) (CA INDEX NAME)



L17 ANSWER 33 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1961:105779 HCAPLUS
DOCUMENT NUMBER: 55:105779
ORIGINAL REFERENCE NO.: 55:19887i,19888a-h
TITLE: Benzofuran. VII. Pyrodecomposition of phenacyl ethers of resorcinol and their conversion to derivatives of 3-phenyl-6-hydroxybenzofuran using pyridine hydrochloride
AUTHOR(S): Royer, Rene; Hudry, Claude
CORPORATE SOURCE: Radium Inst., Curie Foundation, Paris
SOURCE: Bulletin de la Societe Chimique de France (1961) 939-43
CODEN: BSCFAS; ISSN: 0037-8968
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

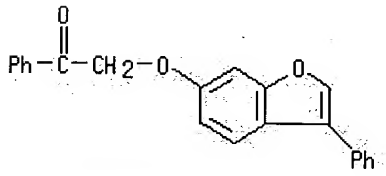
AB Phenacyl ethers were prepd. from phenacyl bromide (I) and resorcinol (II) or its derivs. by heating in a suitable solvent in the presence of K2CO3. Thus, 199 g. I and 110 g. II were heated 5 hrs. in 600 cc. Me2CO with 138 g. K2CO3, then added to 2 l. water. After extn. with 2 l. Et2O in the presence of 100 cc. PhMe, an insol. fraction was sepd., giving 89 g. diphenacyl ether (III) of resorcinol, m. 138°. The Et2O ext. was extd. with 10% NaOH and the aq. ext. acidified with HCl to give 44 g. ω-(3-hydroxyphenoxy)-acetophenone (IV), m. 118°. Similarly from I and the monomethyl ether of II was obtained 43-55% ω-(3-methoxyphenoxy)acetophenone (V), b16 225-6°, m. 84.5°. II (110 g.) heated with 213 g. α-bromopropiophenone (VI) gave 30 g. 2-methyl-3-phenyl-6-hydroxybenzofuran (VII), b17 222-3°, m. 95.5°, and 108 g. of a mixt. of m-C6H4(OCH-MeCOPh)2 (VIII), m. 118°, and another product (IX), m. 85-6°, which gave VII on heating with C5H5N.HCl. Hydroquinone monomethyl ether heated with I gave 62% ω-(4-methoxyphenoxy)acetophenone (X), b16 232-3°, m. 66.5°. Pyrocatechol heated with I gave ω-(2-hydroxyphenoxy)acetophenone (XI), b17 225°, m. 110°; XI with MeI gave the 2-Me ether (XII), m. 104°. 3-Phenyl-6-hydroxybenzofuran heated with I gave 51% ω-(3-phenyl-6-benzofuryloxy)acetophenone (XIII), m. 111°. The phenacyl ethers were heated with twice their wt. of freshly prepd. C5H5N.HCl. The reaction mixt. was poured into dil. acid, extd. with C6H6, and the org. ext. was extd. with base. Acidification of the basic ext. gave the benzofuran product. Thus V gave after 15 min. heating 59% 3-phenyl-6-hydroxy-benzofuran (XIV), b19 242-5°, m. 141°, while α-(3-methoxy-phenoxy)propiophenone gave 65% VII after 120 min. heating. Increased duration of heating reduced the yield of XIV from V. XIV was also obtained from III (31%), and IV (50%). VII was also obtained from VIII (42%). XIV treated with MeI and NaOH in EtOH gave

3-phenyl-6-methoxybenzofuran (XV), b17 210°, m. 39.5°, which was formylated with POCl3in Me2NCHO to give 100% 2-formyl-3-phenyl-6-methoxybenzofuran (XVI), m. 118.5-19.0°. XVI was reduced by the Wolff-Kishner method to give 68% 2-methyl-3-phenyl-6-methoxybenzofuran (XVII), b17 214-16°, m. 67°. XVII was also obtained directly from VII by methylation. XVII oxime, m. 187° and 238°, was dehydrated with Ac2O to 72% 2-cyano-3-phenyl-6-methoxybenzofuran (XVIII), m. 129.5°. XVIII (3.2 g.) was heated 1.25 hrs. with 2.5 g. KOH in 50 cc. EtOH and 3 cc. H2O to give 97% 3-phenyl-6-methoxycoumarilamide (XIX), m. 239°. When heated 7.5 hrs., 2.5 g. XVIII with 5 g. KOH in 50 cc. EtOH and 6 cc. H2O gave 2 g. 6-methoxy-6-phenylcoumarilic acid (XX), m. 209°. Treatment of XV with AcCl and SnCl4 in C6H6 gave 30% 2-acetyl-3-phenyl-6-methoxybenzofuran (XXI), b15 235-40°, m. 79.5-80°, and an equal amt. of a second product, b16 355-65°, m. 142°, possibly 2,2'-bi(3-phenyl-6-methoxybenzofuran). XXI (1 g.) with 0.6 cc. Br and 1.14 g. NaOH in 3.5 g. H2O and ice gave 0.2 g. XX. III (140 g.) heated 45 min. (internal temp. 260-430°) gave 1.2 g. BzOH, 5.3 g. BzH, 3.3 g. Me-COPh, and 2.5 g. XIV. III (140 g.) heated at 295-400° and 20-45 mm. 20 min., with distn. at 125-220°, gave 2.8 g. BzOH, 4.6 g. II, 6 g. XIV, 3.8 g. MeCOPh, and a small amount of IV. V heated 14 min. at 310-75° and 6 min. at 460° gave 20% V, 16% resorcinol monomethyl ether (XXII), 2.5% m-MeOC6H4CHO (XXIII), 3% BzH, and 8% BzOH. V heated 8 min. at 320-65° then 4 min. at 480°, gave 30% V, 5% XXII, 8.5% XXIII, 3.5% BzH, and 7.5% BzOH.

IT **102468-55-3**, Acetophenone, 2-(3-phenyl-6-benzofuranyloxy)-
(prepn. of)

RN 102468-55-3 HCAPLUS

CN Ethanone, 1-phenyl-2-[(3-phenyl-6-benzofuranyl)oxy]- (9CI) (CA INDEX NAME)



L17 ANSWER 34 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER: 1953:37657 HCAPLUS
DOCUMENT NUMBER: 47:37657
ORIGINAL REFERENCE NO.: 47:6393g-i,6394a-c
TITLE: Tetraphenyl-o-benzodifuran. II. A derivative of 7-hydroxy-6-benzoyl-2,3-diphenylcoumarone and of 2,3-dihydroxy-1,4-dibenzoylbenzene
AUTHOR(S): Limontschew, W.; Wiesenberger, E.
CORPORATE SOURCE: Tech. Hochschule, Graz, Austria
SOURCE: Monatshefte fuer Chemie (1952), 83, 137-43
CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

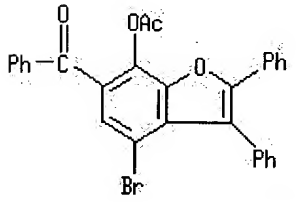
AB cf. C.A. 44, 7824d. 7-Hydroxy-2-benzoyl-2,3-diphenylbenzofuran (I) (0.5 g.) in 20 cc. CCl4 with 0.25 g. Br in 5 cc. CCl4 kept 36 h. at room temp. and distd. on a water bath gave the 4-Br (II) deriv., m. 183° (from AcOH). II (0.5 g.) and 5 cc. Ac2O, heated 1 h. with addn. of aq. AcONa, gave the 7-acetate (III), m. 168.5°, evolving gas at 240°. III (0.5 g.) treated with 0.2 g. CrO3 in hot AcOH, and the soln. concd. to

about 10 cc. gave within 30 min. 5-bromo-2-acetoxy-3-benzoxy-1,4-dibenzoylbenzene (IV), m. 169° (from AcOH). IV (0.4 g.) dissolved in 4 cc. concd. H2SO4 with stirring, let stand 5 min. at room temp., and poured into 300 cc. H2O gave the 2,3-HO compd. deriv. (V), m. 195.5° (from EtOH). V (0.3 g.) in 15 cc. Ac2O heated 1 h. with aq. AcONa, and 5 cc. H2O added, gave the 2,3-diacetate (VI), m. 149.5°, evolving gas at 260°. II or III (0.2 g.) heated 2 h. with 0.3 g. Ac2O and 0.6 g. aq. AcONa in a bomb at 230-40°, and the cryst. product boiled with H2O, washed with much H2O, then with AcOH, dried, and sublimed at 240° and 0.2 mm. pressure gave 6-bromo-4,4',5'-triphenylfurano(2',3':8,7)coumarin, m. 274° (from AcOH). 7-Methoxy-6-benzoyl 2,3-diphenylbenzofuran (0.5 g.) in 10 cc. AcOH treated with 0.2 g. CrO3 over 1 h. gave 2-methoxy-3-benzoyl-1,4-dibenzoylbenzene (VII). VII (0.3 g.) kept in 6 cc. concd. H2SO4 5 min. at room temp., and the mixt. poured into H2O, gave the 2,3-HO(MeO) compd., m. 116.5°. I (0.4 g.), in 20 cc. MeOH and 5 cc. C5H5N, heated with 0.8 g. HONH2.HCl in H2O 3 h. on a water bath gave the oxime (VIII), m. 220°. VIII (0.2 g.) in 5 cc. boiling AcOH, treated with 2 drops concd. H2SO4 in 1 cc. AcOH, and the product obtained on addn. of a small amt. of H2O sublimed at 180-90° under 0.4 mm. pressure in a CO2 stream, gave 2,3,3'-triphenylisooxazolo(4',5':6,7)benzofuran, m. 165°. 2,3,1,4-(HO)2C6H2Bz2 (0.5 g.) in 10 cc. MeOH and 2 cc. C5H5N heated with 1 g. HONH2.HCl in a little H2O 4 h. on a water bath gave the dioxime (IX), m. 242° (from EtOH). IX (0.2 g.) in 10 cc. boiling AcOH treated with 3 drops concd. H2SO4 in 1 cc. AcOH, and the product, which pptd. on addn. of water, sublimed at 200° under 0.4 mm. pressure in a CO2 stream, gave 3',3''-diphenyldiisooxazolo-4',5':1,2; 4'',5'':4,3 benzene, m. 193° (from EtOH).

IT **651359-18-1**, Ketone, 4-bromo-7-hydroxy-2,3-diphenyl-6-benzofuranyl phenyl, acetate
(prepn. of)

RN 651359-18-1 HCAPLUS

CN Ketone, 4-bromo-7-hydroxy-2,3-diphenyl-6-benzofuranyl phenyl, acetate (5CI) (CA INDEX NAME)



L17 ANSWER 35 OF 35 HCAPLUS COPYRIGHT 2004 ACS on STN

Full Text | Citing References

ACCESSION NUMBER:	1951:21773 HCAPLUS
DOCUMENT NUMBER:	45:21773
ORIGINAL REFERENCE NO.:	45:3835e-i,3836a-d
TITLE:	Condensation of benzoin and hydroquinone. III. Derivatives of 5-hydroxy-6-benzoyl-and 5-hydroxy-4-benzoyl-2,3-diphenylcoumarone
AUTHOR(S):	Limontschew, W.; Dischendorfer, O.
CORPORATE SOURCE:	Tech. Hochschule, Graz, Austria
SOURCE:	Monatshefte fuer Chemie (1950), 81, 737-45 CODEN: MOCMB7; ISSN: 0026-9247
DOCUMENT TYPE:	Journal
LANGUAGE:	German

AB cf. C.A. 43, 7016g. Some linear and angular derivs. have been prepd.

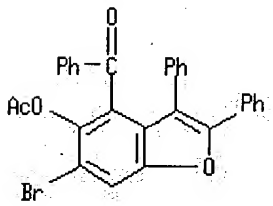
5-Hydroxy-6-benzoyl-2,3-diphenylcoumarone (I) (0.5 g.) in 30 mL. CCl4 was treated with 0.23 g. Br in 5 mL. CCl4, allowed to stand 24 h. at room temp., the solvent distd. with an air stream at room temp., and the residue recrystd. once from alc. and twice from glacial HOAc to give golden yellow needles of the 4-Br deriv. (II), m. 182.5°. II (0.2 g.) refluxed 1 h. with 3 mL. BzCl and 3 mL. C5H5N, eluted with water, and the residue filtered off, dried, and recrystd. from glacial HOAc and alc. gave 4-bromo-5-benzoxy-6-benzoyl-2,3-diphenylcoumarone (III), colorless plates, m. 149°. II (0.2 g.) heated 1 h. in 10 mL. Ac2O and anhyd. NaOAc gave square colorless plates of the AcO analog (IV) of III, m. 161° (from alc. or glacial HOAc). IV (0.4 g.) was oxidized in 20 mL. glacial HOAc with 0.15 g. Cr2O3 20 min. and pptd. with water as colorless rods of 3,2,5,1,4-Br(AcO)(BzO)C6HBz2 (V), m. 155°, decomp. 250°. V (0.4 g.) sapond. in 8 mL. concd. H2SO4 15 min. at room temp., poured into water, and the light yellow ppt. washed with water gave yellow plates of 3,2,5,1,4-BrBz2C6H(OH)2 (VI), m. 216°. VI (0.2 g.) refluxed in 5 mL. Ac2O and 0.1 g. anhyd. NaOAc 1 h., and the product decompd. with water and recrystd. from alc. gave colorless 6-sided rods of the 1,4-diacetate, m. 128°. 3,6,2,5,1,4-Br2Bz2C6(OH)2 (VII) (0.1 g.) refluxed with 15 mL. Ac2O and 0.1 g. anhyd. NaOAc 1 h. gave the diacetate, colorless plates, sinters 228°, decomp. 235°. IV (or II) (0.2 g.) was heated with 0.3 g. Ac2O and 0.6 g. NaOAc in a sealed tube 2 h. at 220-30°, and the brown cryst. mass boiled with water, washed with cold glacial HOAc, dried, and sublimed at 0.4 mm. and 240-50° in a stream of CO2, giving 8-bromo-4,4',5'-triphenylfurano(2',3',6,7)coumarin, light yellow flat needles, m. 327° (from glacial HOAc). I (0.8 g.) dissolved 20 mL. in boiling AmOH and 5 mL. 50% aq. KOH, treated over 15 min. with 20 mL. freshly distd. Me2SO4 and 50% KOH in portions, 20 mL. water added to dissolve the K2SO4, and the soln. cooled, gave the 5-Me ether (IX), long needles, m. 141°; 0.5 g. IX in 15 mL. glacial HOAc treated with 0.25 g. Cr2O3 over 20 min., concd. to half vol., and chilled, gave 65% 2,5,1,4-MeO(BzO)C6H2Bz2 (X), colorless 4-sided prisms, m. 155.5° (from alc.). X (0.5 g.) warmed 30 min. in 25 mL. 1% alc. KOH on the steam bath, the alc. distd., and the residue dissolved in water and satd. with CO2 gave 2,5,1,4-HO(MeO)C6H2Bz2 (XI), long yellow prisms, m. 149° (from alc.). XI (0.2 g.) boiled 30 min. with 5 mL. Ac2O and 0.1 g. anhyd. NaOAc and poured into water gave 2,5,1,4-MeO(AcO)C6H2Bz2 (XII), colorless flat crystals, m. 125°. XII (0.2 g.) was heated with 0.6 mL. Ac2O and 0.6 g. anhyd. NaOAc in a sealed tube at 220° and the brown cryst. mass eluted with water, and distd. at 0.4 mm. and 200°, giving 6-methoxy-7-benzoyl-4-phenylcoumarin (XIII), light yellow, long, square plates, m. 177°; vacuum distn. of XIII at 0.4 mm. and 260-80° in a stream of CO2 gave the dilactone of hydroquinone-2,5-dicinnamic acid (2,5-dihydroxy-β,β'-diphenyl-p-benzenediacrylic acid), m. 364°, yellow crystals. 5-Hydroxy-4-benzoyl-2,3-diphenylcoumarone (0.3 g.) in 25 mL. CCl4 allowed to stand with 0.15 g. Br in 5 mL. CCl4 24 h. at room temp. under CaCl2, the solvent distd., and the yellow residue recrystd. from alc. gave the 6-Br deriv. (XIV), large, light yellow prisms, m. 190°. XIV (0.3 g.) heated with 5 mL. Ac2O and 0.1 g. anhyd. NaOAc 1 h. and poured into water yielded 6-bromo-5-acetoxy-4-benzoyl-2,3-diphenylcoumarone (XV), colorless needles, m. 163.5° (from alc.). XV (0.2 g.) in 10 mL. glacial HOAc with 0.075 g. Cr2O3 added over 20 min., the soln. boiled 10 min., concd., and water added gave 4,3,6,1,2-Br(AcO)(BzO)C6HBz2 (XVI), colorless prisms, m. 157.5° (from alc.). XVI (0.1 g.) heated in 10 mL. 1% alc. KOH 10 min. on the steam bath, the alc. distd., and the residue dissolved in 300 mL. water and pptd. with a stream of CO2 gave 5,2,3,1,4-BrBz2C6H(OH)2 (XVII), flat yellow needles, m. 174° (from alc. or ligroin). XVI (or XVII) (0.1 g.) in 5 mL. concd. H2SO4 kept at

room temp. 10 min. and poured into water gave 5-bromo-1,3-diphenyl-4,7-isobenzofurandione, light red branched needles, m. 168° (from alc.). (cf. Pummerer, et al., C.A. 38, 1214.6).

IT **651359-20-5**, Ketone, 6-bromo-5-hydroxy-2,3-diphenyl-4-benzofuranyl phenyl, acetate
(prepn. of)

RN 651359-20-5 HCAPLUS

CN Ketone, 6-bromo-5-hydroxy-2,3-diphenyl-4-benzofuranyl phenyl, acetate (5CI) (CA INDEX NAME)



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FULL ESTIMATED COST	199.59	514.00

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CA SUBSCRIBER PRICE	-25.64	-25.64

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L2 50 S L1
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L4 0 S L3
L5 0 S L3 FULL
L6 STRUCTURE UPLOADED
L7 7 S L6

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L8            94 S L7 FULL

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L9            37 S L8
L10            1 S L9 AND OHKAWA, S?/AU
L11           36 S L9 NOT L10
L12            0 S L11 AND SETOH, M?/AU
L13            0 S L11 AND KAKIHANA, M?/AU
L14            1 S L11 AND OKURA, M?/AU
L15            1 S L14 NOT L10
L16            1 S L11 AND L15
L17           35 S L11 NOT L15

     FILE 'CAOLD' ENTERED AT 17:41:12 ON 25 APR 2004

=> s l8
L18            3 L8

=> d l18, 1-3

L18  ANSWER 1 OF 3  CAOLD  COPYRIGHT 2004 ACS on STN
AN   CA62:16218g  CAOLD
TI   synthesis of substituted linear furano[2,3-g]-[1]benzopyrones and
     [3,2-b]thianaphthenopyrones
AU   Mustafa, Ahmed; Asker, W.; Hishmat, O. H.; Ali, M. I.; Mansour, A. K.;
     Abed, N. M.; Khalil, K. M. A.; Samy, S. M.
IT   2034-80-2   2034-81-3   2034-82-4   2034-83-5   2034-84-6   2034-85-7
     2034-86-8   2034-87-9   2034-88-0   2034-89-1   2034-90-4   2034-91-5
     2034-92-6   2034-93-7   2035-11-2   2035-12-3   2035-13-4   2035-18-9
     2035-19-0   2035-20-3   2035-21-4   2035-22-5   2035-23-6   2035-24-7
     2035-25-8   2035-26-9   2035-27-0   2035-28-1   2035-29-2   2035-30-5
     2035-31-6   2035-33-8   2035-34-9   2035-35-0   2035-36-1   2035-55-4
     2035-56-5   2035-57-6   2035-58-7   2035-59-8   2035-60-1   2232-82-8
     2232-83-9   2232-84-0   2232-85-1   2239-08-9   2239-09-0   2239-10-3
     2239-11-4   2239-14-7   2239-15-8   2607-45-6   2784-77-2   2864-01-9
     94375-18-5

L18  ANSWER 2 OF 3  CAOLD  COPYRIGHT 2004 ACS on STN
AN   CA55:19888a  CAOLD
TI   benzofuran - (VII) pyrodecompn. of phenacyl ethers of resorcinol and their
     conversion to derivs. of 3-phenyl-6-hydroxybenzofuran using pyridine
     hydrochloride
AU   Royer, Rene; Hudry, C.
IT   13156-22-4  13196-08-2  14385-48-9  14385-49-0  18064-99-8  42188-49-8
     53020-57-8  56397-42-3  58468-44-3  72108-95-3  102468-55-3  103164-37-0
     103391-80-6  103640-98-8  103642-60-0

L18  ANSWER 3 OF 3  CAOLD  COPYRIGHT 2004 ACS on STN
AN   CA51:3548i  CAOLD
TI   condensation of benzoin and resorcinol - (II) degradation products of
     lin-m-benzotetraphenyldifuran
AU   Limontschew, W.; Pelikan-Kollmann, L.
IT   101-99-5   105-40-8   107-14-2   353-85-5   375-00-8   378-01-8
     422-04-8   615-53-2   2621-78-5   3088-15-1   21339-82-2   62369-37-3
     102665-13-4  103035-35-4  103165-78-2  103282-15-1  103282-18-4
     108839-38-9  111531-72-7  114696-34-3  122118-04-1  122218-52-4  124104-83-2


=> fil reg; d acc 2035-12-3; fil CAOLD
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FILE 'REGISTRY' ENTERED AT 17:41:28 ON 25 APR 2004

ANSWER 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 2035-12-3 REGISTRY
CN Cinnamic acid, 2,3-diphenyl-5-benzofuranyl ester (7CI, 8CI) (CA INDEX NAME)
FS 3D CONCORD
MF C29 H20 O3
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS
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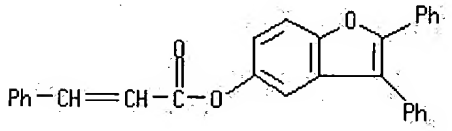


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

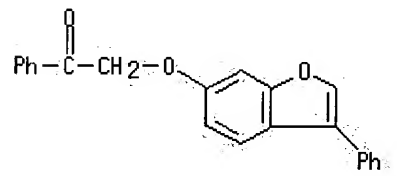
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

FILE 'CAOLD' ENTERED AT 17:41:28 ON 25 APR 2004

=> **fil reg; d acc 102468-55-3; fil CAOLD**

FILE 'REGISTRY' ENTERED AT 17:41:36 ON 25 APR 2004

ANSWER 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 102468-55-3 REGISTRY
CN Ethanone, 1-phenyl-2-[(3-phenyl-6-benzofuranyl)oxy]- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acetophenone, 2-(3-phenyl-6-benzofuranyloxy)- (6CI)
FS 3D CONCORD
MF C22 H16 O3
SR CAOLD
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

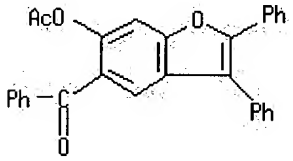
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

FILE 'CAOLD' ENTERED AT 17:41:36 ON 25 APR 2004

=> fil reg; d acc 103165-78-2; fil CAOLD

FILE 'REGISTRY' ENTERED AT 17:41:43 ON 25 APR 2004

ANSWER 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 103165-78-2 REGISTRY
CN Ketone, 6-hydroxy-2,3-diphenyl-5-benzofuranyl phenyl, acetate (6CI) (CA INDEX NAME)
FS 3D CONCORD
MF C29 H20 O4
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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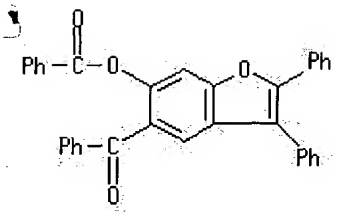
=> fil reg; d acc 103282-15-1; fil CAOLD

FILE 'REGISTRY' ENTERED AT 17:41:49 ON 25 APR 2004

ANSWER 1 REGISTRY COPYRIGHT 2004 ACS on STN
RN 103282-15-1 REGISTRY
CN Ketone, 6-hydroxy-2,3-diphenyl-5-benzofuranyl phenyl, benzoate (6CI) (CA INDEX NAME)
FS 3D CONCORD
MF C34 H22 O4
SR CAOLD
LC STN Files: BEILSTEIN*, CAOLD
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

FILE 'CAOLD' ENTERED AT 17:41:50 ON 25 APR 2004

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.42	526.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-25.64

STN INTERNATIONAL LOGOFF AT 17:42:03 ON 25 APR 2004